

SCREENING SITE INSPECTION REPORT
FOR

ALIGNED FIBER COMPOSITES, INC.

CHATFIELD, MINNESOTA

U.S. EPA ID: MND062859038

SS ID: NONE

TDD: F05-8910-007

PAN: FMN0225SB

EPA Region 5 Records Ctr.



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JULY 8, 1991



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TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1	INTRODUCTION.....	1-1
2	SITE BACKGROUND.....	2-1
	2.1 INTRODUCTION.....	2-1
	2.2 SITE DESCRIPTION.....	2-1
	2.3 SITE HISTORY.....	2-1
3	SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS.....	3-1
	3.1 INTRODUCTION.....	3-1
	3.2 SITE REPRESENTATIVE INTERVIEW.....	3-1
	3.3 RECONNAISSANCE INSPECTION.....	3-1
	3.4 SAMPLING PROCEDURES.....	3-4
4	ANALYTICAL RESULTS.....	4-1
5	DISCUSSION OF MIGRATION PATHWAYS.....	5-1
	5.1 INTRODUCTION.....	5-1
	5.2 GROUNDWATER.....	5-1
	5.3 SURFACE WATER.....	5-3
	5.4 AIR.....	5-3
	5.5 FIRE AND EXPLOSION.....	5-4
	5.6 DIRECT CONTACT.....	5-4
6	REFERENCES.....	6-1

Table of Contents (Cont.)

<u>Appendix</u>	<u>Page</u>
A SITE 4-MILE RADIUS MAP.....	A-1
B U.S. EPA FORM 2070-13.....	B-1
C FIT SITE PHOTOGRAPHS.....	C-1
D U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS.....	D-1
E WELL LOGS OF THE AREA OF THE SITE.....	E-1

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
2-1	Site Location.....	2-2
3-1	Site Features.....	3-3
3-2	Soil/Sediment Sampling Locations.....	3-5
3-3	Groundwater Sampling Locations.....	3-7

LIST OF TABLES

<u>Table</u>		<u>Page</u>
3-1	Addresses and Depths of Groundwater Wells.....	3-9
4-1	Results of Chemical Analysis of FIT-Collected Soil/Sediment Samples.....	4-2
4-2	Results of Chemical Analysis of FIT-Collected Groundwater Samples.....	4-5

1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Aligned Fiber Composites, Inc. (AFC), site under contract number 68-01-7347.

The site was initially discovered by the Minnesota Pollution Control Agency (MPCA) in October 1984. The site was discovered when MPCA approved the disposal of dehydrated settling lagoon sludge at the Olmstead County Sanitary Landfill by Aligned Fiber Composites, Inc. (Aligned Fiber).

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Shawn Ruotsinoja of MPCA and is dated January 31, 1986.

FIT prepared an SSI work plan for the AFC site under technical directive document (TDD) F05-8910-007, issued on October 12, 1989. The SSI work plan was approved by U.S. EPA on April 27, 1990. The SSI of the AFC site was conducted on June 25 and 26, 1990, under amended TDD F05-8910-007, issued on April 27, 1990.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of five soil/sediment samples and two groundwater samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined

preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.

The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and the reconnaissance inspection of the site.

2.2 SITE DESCRIPTION

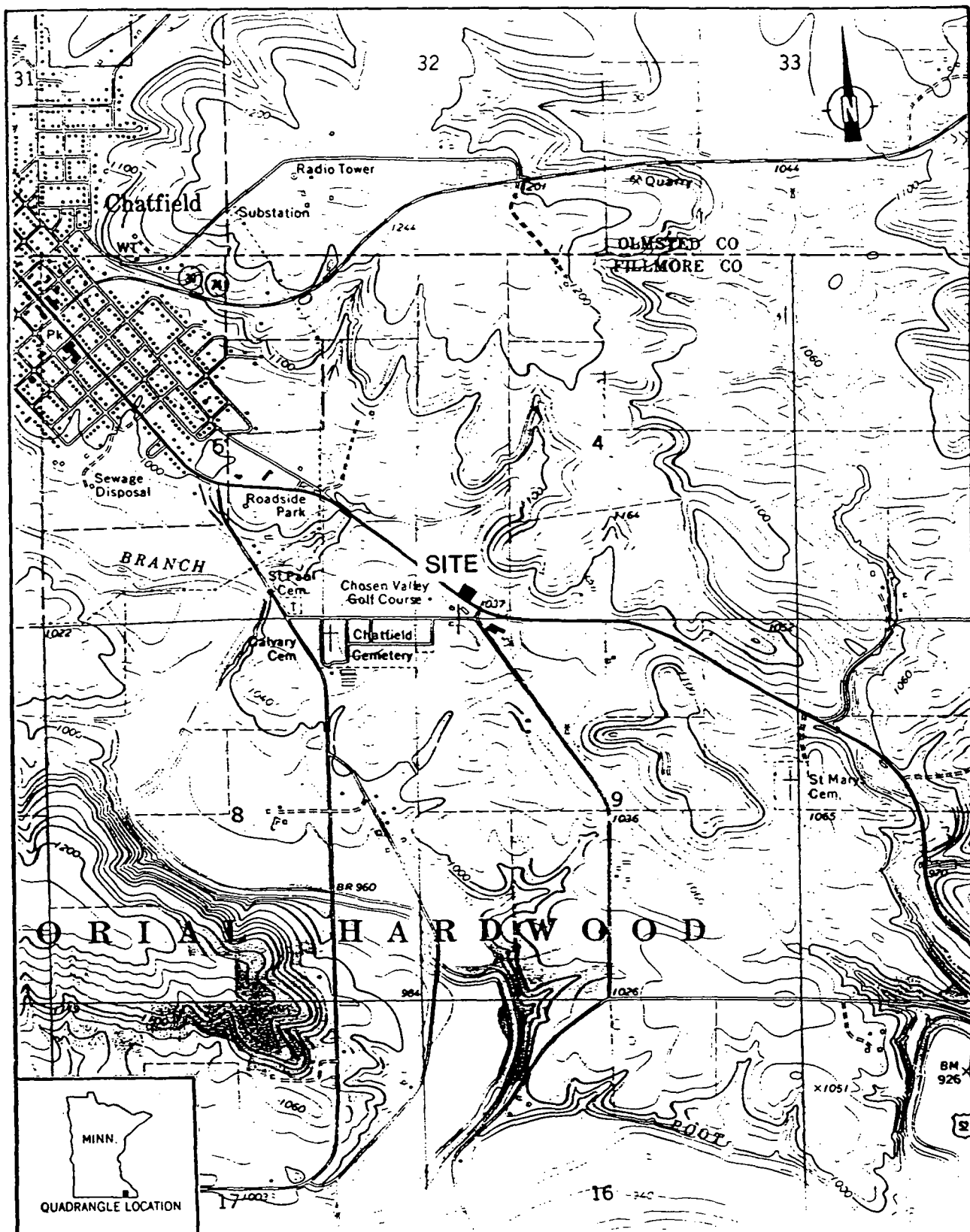
The AFC site is a 24-acre parcel of land upon which an active manufacturer of fiberglass products is located. The site is located on Highway 52 South, approximately 1 mile southeast of Chatfield, Fillmore County, Minnesota (SW1/4SW1/4 sec. 4, T.104N., R.11W.) (see Figure 2-1 for site location). The North Branch of the Root River is located approximately 1/2 mile west of the site.

A 4-mile radius map of the AFC site is provided in Appendix A.

2.3 SITE HISTORY

The facility has been operated by Aligned Fiber since 1975, when it purchased the site from Clarence Perkins. Perkins had used the site as farmland. Aligned Fiber owned the site and the manufacturing facility until January 1, 1987, when Morrison Molded Fiber Glass Company (MMFG), Bristol, Virginia, purchased the site. MMFG's parent company is Shell Polymer and Catalyst Enterprises, Houston, Texas. Currently, Aligned Fiber employs 140 people at the facility (Thorson and White 1990).

Aligned Fiber manufactures structural fiberglass materials, including industrial flooring, fence posts, and carbon reinforced arrow



SOURCE: USGS, Chatfield, MN Quadrangle, 7.5 Minute Series, 1974.

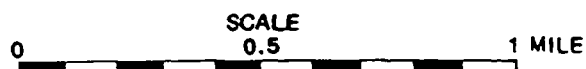


FIGURE 2-1 SITE LOCATION

shafts. The manufacturing process, known as "pultrusion," involves pulling a fibrous glass material through a steel mold. Fiberglass is made at the plant by combining glass with polyester and vinyl ester resins, then adding an organic peroxide as a catalyst to speed the reactive resin hardening process. This results in the formation of an inert polymerized material (Thorson and White 1990).

In the original process fiberglass dust was disposed of with contact cooling water. The contact cooling water was run over the fiberglass while it was being trimmed. A settling pond was built in 1975, into which both contact and noncontact cooling water was discharged. Aligned Fiber had a National Pollutant Discharge Elimination System (NPDES) permit for this discharge. Two more settling ponds were built in 1976. Each of the ponds had a surface area of approximately 3,000 square feet. At approximately the same time that the settling ponds were opened, Aligned Fiber had two underground storage tanks installed. These tanks were each designed to hold 2,500 gallons of virgin styrene (Thorson and White 1990).

In 1984, 375 cubic yards, and in 1985, 200 cubic yards, of settling pond sludge was disposed of at Olmstead County Landfill. One of the settling ponds was filled in 1985 to accommodate plant expansion, while another pond was built to replace it. The new pond was approximately the same size as the other ponds (Thorson and White 1990).

MPCA inspected the AFC site on January 23, 1985, in accordance with Chapter 7045 of Minnesota Hazardous Waste Rules. MPCA noted that waste acetone, waste dichloromethane, and waste pigment were stored outside of the manufacturing facility, in a semitrailer that lacked any means of containing spills; Aligned Fiber lacked a personnel training program for employees involved with hazardous waste management; Aligned Fiber had no contingency plan for hazardous waste spills; and Aligned Fiber's annual disclosure form had not been updated. Aligned Fiber corrected these violations and, on October 31, 1985, MPCA informed Aligned Fiber that it had returned to compliance (Thorson and White 1990).

In December 1986 approximately 600 gallons of styrene was spilled. The spill occurred in the chemical storage building, as styrene was being pumped into an underground storage tank. Both MPCA and the U.S.

EPA National Response Center were notified that the spill had occurred. Aligned Fiber cleaned up the spill by covering the styrene with sand and placing the mixture in 75, 55-gallon drums. On February 2, 1988, a soil boring was performed by Twin City Testing, Minneapolis, Minnesota, to determine styrene levels in the area in which the spill had occurred. The styrene concentration at a depth of 1 foot or less was 340 ppm, at a depth of 1 to 2 1/2 feet the concentration was 530 ppm, between 2 1/2 and 4 1/2 feet the concentration was 4 ppm, and between 4 1/2 and 6 1/2 feet the concentration was 31 ppm. The report from Twin City Testing was submitted to MPCA in a letter regarding disposal options for the 75 drums of styrene-contaminated sand. MPCA determined that the sand in the drums would not be classified as hazardous waste under Minnesota Hazardous Waste Rules. MPCA also forwarded three disposal options for the drums: incineration at an asphalt plant, disposal at a sanitary landfill, or to land-apply the contaminated sand at an MPCA-approved site. Aligned Fiber contracted with Chemical Waste Management, Oak Brook, Illinois, to dispose of the drums. In October 1988 the drums were transported by Controlled Waste, Menomonee Falls, Wisconsin, to Metro Landfill in Franklin, Wisconsin. After these actions by Twin City Testing, no further cleanup of the styrene spill occurred (Thorson and White 1990; U.S. EPA 1986).

MPCA conducted a second inspection of the AFC site on August 12, 1987. MPCA noted the following violations: weekly inspections of hazardous waste storage areas had not been documented; all personnel that handled hazardous waste did not have an annual review of hazardous waste training; and copies of the contingency plan had not been sent to the local fire department and police station (Thorson and White 1990).

At the same time as the inspection by MPCA, U.S. EPA conducted an inspection concerning the land disposal restrictions for the solvent wastes listed in classes F001 through F005 of RCRA. Aligned Fiber was found to be in violation of the requirement to provide written notification to receiving facilities of the following information: U.S. EPA hazardous waste number, applicable treatment standards if the waste is to be disposed of on land, the manifest number associated with the shipment of the waste, and waste analysis when available. Aligned Fiber corrected these violations and, on October 14, 1987, MPCA provided

notice that Aligned Fiber had returned to compliance with Minnesota Hazardous Waste Rules (Thorson and White 1990).

In November 1987 Aligned Fiber voluntarily removed the two underground storage tanks. The tanks were removed by Bessingpas Excavating, Chatfield, Minnesota. The tanks were cleaned by Rochester Petrol Products, Rochester, Minnesota, and the waste was disposed of with Aligned Fiber's regular solid waste. Soil in the area from which the tanks were removed was tested by Twin City Testing. No styrene was detected in the three locations from which samples were collected (Thorson and White 1990).

All of the settling ponds were filled in 1988, when a baghouse dust collection system was installed to replace them. Engineered fill material was used to fill in the ponds and to cap them to a depth of 4 to 5 feet above the original grade of the ponds (Thorson and White 1990).

The baghouse system is a dry collection system. Therefore, there is no need for contact cooling water. With the elimination of fiberglass dust from the discharge waste, Aligned Fiber applied for a new NPDES permit to allow it to discharge directly to an intermittent creek that flows into the North Branch of the Root River. This permit was approved by MPCA, and Aligned Fiber is currently operating under the new permit. Aligned Fiber tests the point of discharge monthly and at the time of renewal of the permit. Tests from March 1988 showed the following results: oils and grease <1.1 mg/L, pH 7.99, suspended solids <1 mg/L, and turbidity 1.03. These tests were conducted by Davy Laboratories of LaCrosse, Wisconsin (Thorson and White 1990).

Aligned Fiber is classified under RCRA as a large quantity generator of waste acetone, waste methylene chloride, waste methyl ethyl ketone (MEK), and waste mineral spirits. The RCRA wastes are shipped off-site within 90 days. The acetone, methylene chloride, and MEK are transported by Hydrite Chemical Company to Auganic Industries, Inc., Cottage Grove, Wisconsin. Waste mineral oils are shipped by Safety-Kleen Corporation to its own facility in LaCrosse, Wisconsin. Aligned Fiber disposes of approximately 8,400 pounds of waste acetone, 7,800 pounds of waste methylene chloride, 440 pounds of waste MEK, and 45 pounds of waste mineral oils every 90 days (Thorson and White 1990).

Aligned Fiber produces approximately 13,000 pounds of waste paint filters each year. These filters are incinerated by Olmstead Waste to Energy, Rochester, Minnesota. Waste oil that Aligned Fiber produces is returned to its supplier, Fisher Oil, Rochester, Minnesota, for disposal. From 1975 to 1982 Aligned Fiber used waste oils to coat parking lots rather than shipping them off-site. In 1989 Aligned Fiber purchased 660 gallons of hydraulic oil, 110 gallons of heat-transfer oil, and 55 gallons of compressor oil (Thorson and White 1990).

Catalyzed resin sludge is generated at the rate of approximately 30,000 pounds per year. This material has been landfilled in Spring Valley, Minnesota; in New Hampton, Iowa; and currently in Decorah, Iowa (Thorson and White 1990).

Aligned Fiber also generates waste laboratory packs from its chemistry laboratory. These laboratory packs contain waste acids, waste alkalines, waste flammable liquids, and other wastes listed by Aligned Fiber as "non-regulated special waste." The wastes are hauled off-site by Chemical Waste Management, Oak Brook, Illinois, and disposed of in its own facility. There is no regulatory action currently taking place at the site (Thorson and White 1990).

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the AFC site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the AFC site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Mike McAteer, FIT team leader, conducted an interview with Dennis Thorson, Plant Engineer, Aligned Fiber, and Allen White, Safety Director, MMFG. The interview was conducted at Aligned Fiber on June 25, 1990, at 1:00 p.m. Also present at the interview was Reggie Suga, FIT team member. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the AFC site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection began at 8:45 a.m. on June 26, 1990, and included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also

determined sampling locations during the reconnaissance inspection. FIT was accompanied by Thorson and White during the reconnaissance inspection.

Reconnaissance Inspection Observations. The 24-acre AFC site consists of an active manufacturing facility for fiberglass products located in an industrial park approximately 1 mile southeast of Chatfield, Minnesota. The AFC site is irregularly shaped and is bounded on the north by County Highway 5, on the south by U.S. Highway 52, on the east by an unnamed road that joins the two highways, and on the west by Touhy Corporation's plant # 4 (see Figure 3-1 for site features). There is a wooded hillside on the eastern portion of the site, and the site slopes toward the west where an intermittent creek provides surface water drainage.

The manufacturing building is L-shaped. The junction of the two wings of the facility forms the southern point of the building; one wing is oriented toward the northwest, and the other wing is oriented toward the northeast. The building is surrounded by a band of gravel varying from 20 to 150 feet wide. The area beyond the gravel band is grass fields and, on the west, a field of alfalfa.

On the south side of the building is a gravel parking lot with a driveway that leads to Highway 52. In the alfalfa field on the west side of the site is the outfall, which is located approximately 200 feet northwest of the manufacturing building. A septic field is located north of the building, between the gravel and the fence. A RCRA waste storage trailer is located approximately 100 feet west of the northeast wing of the building. Immediately east of the RCRA trailer is a waste paint storage trailer. The baghouse dust collector is located on the north side of the building, where the wings join. A bulk styrene storage trailer was located east of the manufacturing building. A chemical storage building for laboratory packs is located approximately 50 feet southwest of the styrene storage trailer. Empty drums were stored between the manufacturing building and the styrene trailer, and between the manufacturing building and the chemical storage building. An organic peroxide storage building is located approximately 250 feet southeast of the east corner of the manufacturing building.

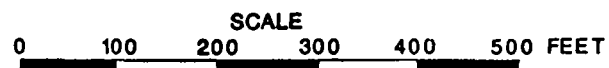
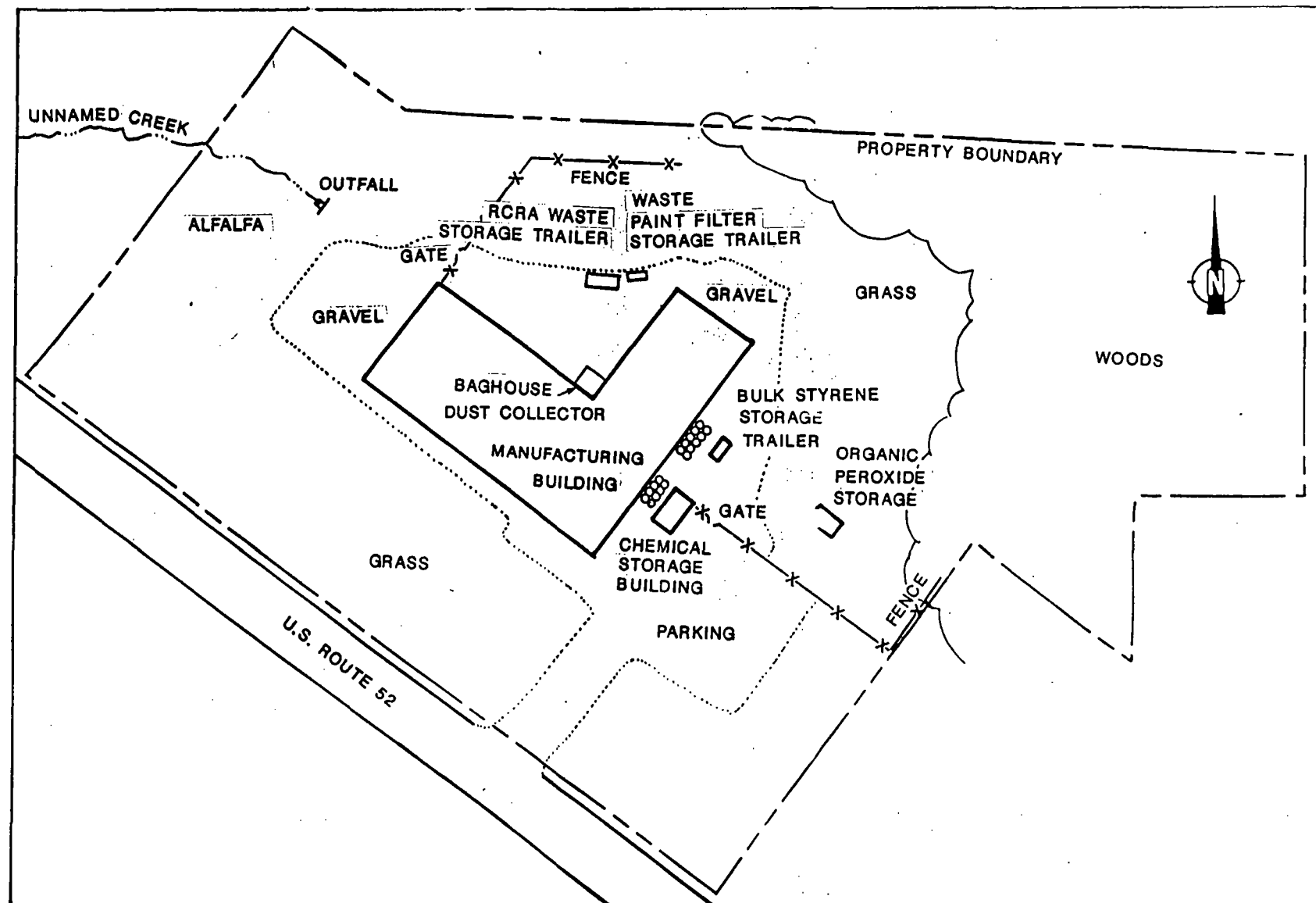


FIGURE 3-1 SITE FEATURES

The site is only partially fenced. One section of fence runs northeast from the northwest corner of the manufacturing building for approximately 200 feet. From that point, the fence extends approximately 200 feet east. A gate is located near the northwest corner of the building. A second fence extends approximately 320 feet southeast from the chemical storage building, and then turns and extends northeast for approximately 100 feet. This section of fence has a gate near the chemical storage building. It is not known whether these gates are kept locked.

FIT photographs from the SSI of the AFC site are provided in Appendix C.

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or Target Analyte List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix D.

On June 26, 1990, FIT collected four soil samples and one sediment sample on-site, including one potential background soil sample. FIT also collected two groundwater samples. A portion of each soil/sediment sample was offered to the site representatives, and was accepted.

Soil/Sediment Sampling Procedures. Soil sample S1 was a composite sample collected from locations near the organic peroxide storage building, and near the chemical storage building where the styrene spill occurred (see Figure 3-2 for soil/sediment sampling locations). The first portion of sample S1 was collected at a depth of 14 inches, and the second portion was collected at a depth of 3 feet. The portion for volatile organic analysis (VOA) was collected at the second location. Soil sample S2 was a composite sample collected from three locations in the grassy area north of the manufacturing building, at locations where stressed vegetation was evident. The first portion was collected at a depth of 2 feet, the second was collected at a depth of 2 feet, and the third at a depth of 20 inches. The VOA portion of the sample was collected from the third location. Soil sample S3 was a composite sample collected from locations on the east and west sides of the septic field

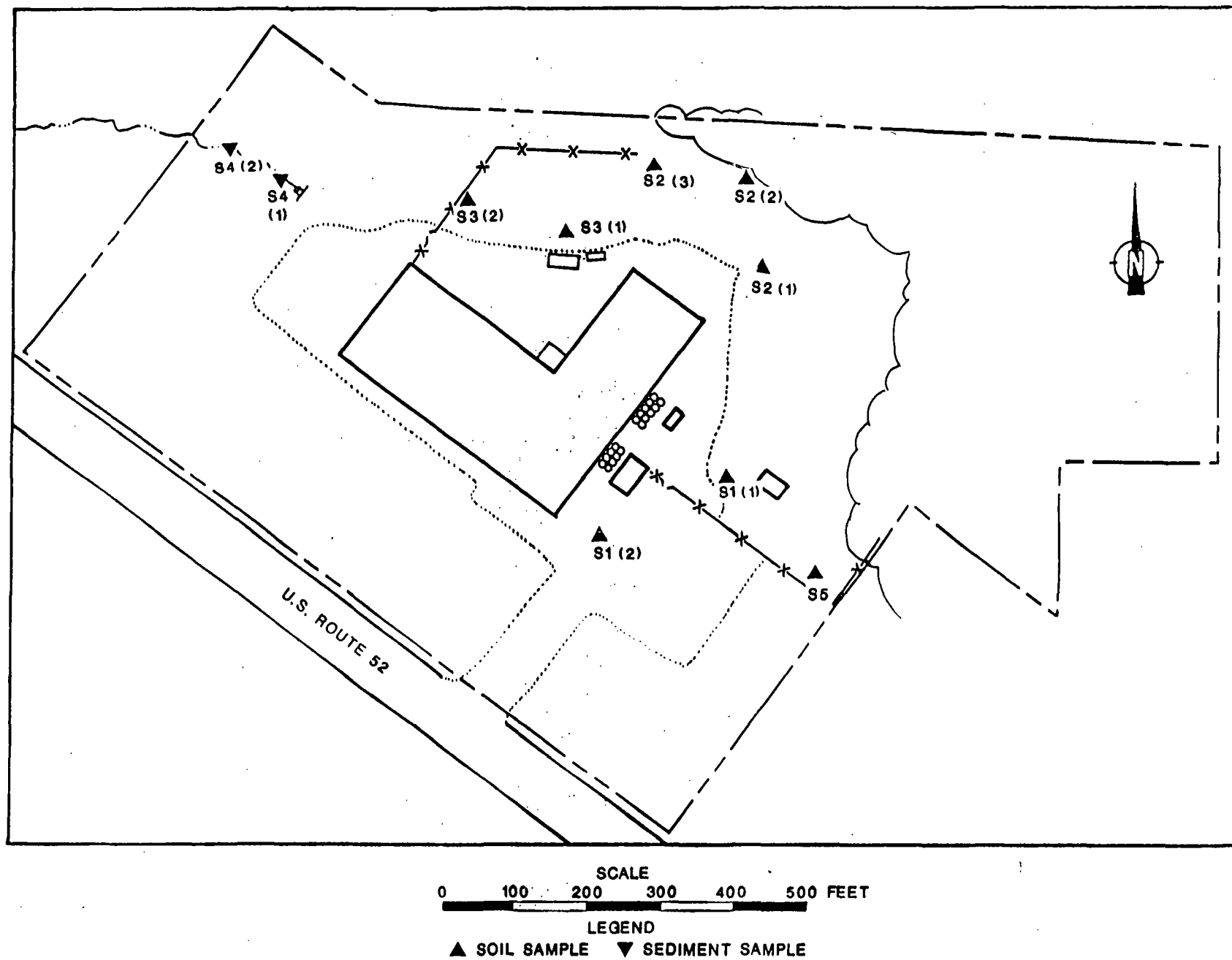


FIGURE 3-2 ON-SITE SOIL/SEDIMENT SAMPLING LOCATIONS

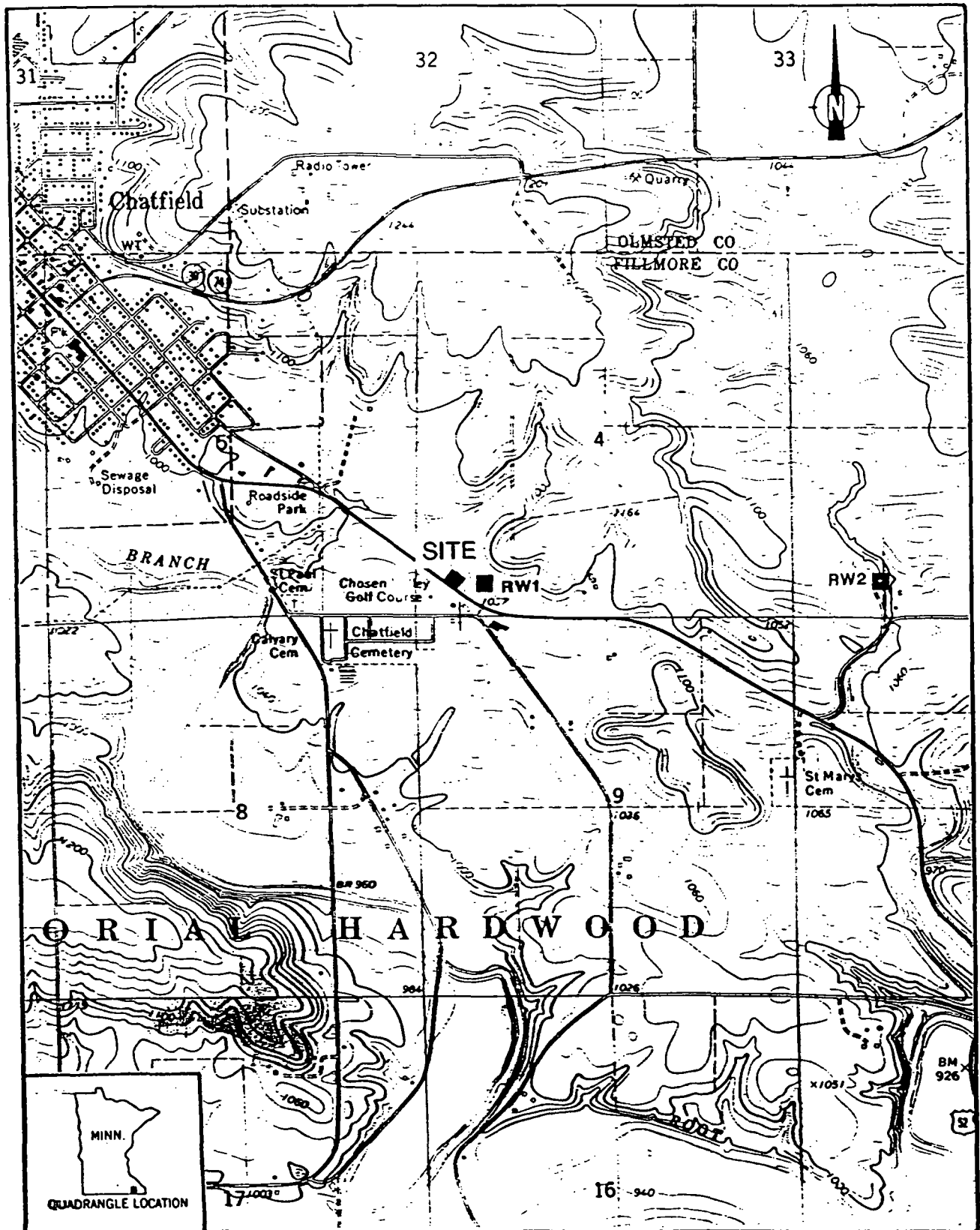
to determine whether wastes had been disposed of through the septic system. The first portion of sample S3 was collected at a depth of 5 feet; the second portion was collected at a depth of 5 feet from a pre-existing hole 2 1/2 feet deep. The VOA portion of the sample was collected from the second location. Sediment sample S4 was a composite sample collected from two locations at the outfall to determine whether TCL compounds and TAL analytes could be migrating off-site via surface water runoff. Both portions were collected from a depth of 0 to 3 inches. The VOA portion of the sample was collected from the first location. Soil sample S5 was a potential background sample collected approximately 100 feet upgradient of the organic peroxide storage building. Sample S5 was collected at a depth of approximately 40 inches.

The deep soil samples were collected using a hand auger or a post-hole digger, while sediment sample S4 was collected using a hand trowel. For the composite samples, a portion of soil was transferred from each sampling location to a stainless steel bowl, mixed, and then transferred to the appropriate sample bottles using a stainless steel spoon or hand trowel. The grab sample S5 was collected in the same manner as the composite samples. The VOA sample portion was collected first and transferred directly into sample bottles (E & E 1987).

Standard E & E decontamination procedures were adhered to during the collection of all soil/sediment samples. The procedures included the scrubbing of all equipment (e.g., spoons, trowels, hand auger, and posthole digger) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil/sediment samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil/sediment samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP).

Groundwater Sampling Procedures. Groundwater samples RW1 and RW2 were collected to determine local groundwater characteristics. Groundwater sampling location RW1 was selected because it is within 1,000 feet of the site, and because it is a municipal well serving the city of Chatfield, Minnesota (see Figure 3-3 for groundwater sampling locations). Groundwater sample RW2 was collected from a residential well



SOURCE: USGS, Chatfield, MN Quadrangle, 7.5 Minute Series, 1974.

FIGURE 3-3 GROUNDWATER SAMPLING LOCATIONS

located approximately 1 mile east of the site (see Table 3-1 for addresses and depths of groundwater wells).

All groundwater samples were obtained from outlets that bypassed water treatment systems and storage tanks. Water was allowed to discharge from the outlets for 15 minutes before samples were collected to ensure that the sample sources had been purged of standing water (E & E 1987). In accordance with U.S. EPA quality assurance/quality control requirements, a duplicate groundwater sample and a field blank sample were collected. The field blank sample was prepared from distilled water. The duplicate sample was collected at location RW1.

As directed by U.S. EPA, all groundwater samples were analyzed using the U.S. EPA CLP and the U.S. EPA Central Regional Laboratory (CRL) of Chicago, Illinois.

Table 3-1

ADDRESSES AND DEPTHS OF GROUNDWATER WELLS

Sample	Well Depth (feet)	Address
RW1 and Duplicate	440*	Chatfield Municipal Well #3 Chatfield, MN 55923
RW2	Unknown	Route 3, Box 182 Chatfield, MN 55923

* Source: municipal well log.

4. ANALYTICAL RESULTS

This section presents results of the chemical analysis of FIT-collected soil/sediment and groundwater samples for TCL compounds and TAL analytes. All samples were analyzed for volatile organics, semi-volatile organics, pesticides/polychlorinated biphenyls (PCBs), metals, and cyanides. Complete chemical analysis results of FIT-collected soil/sediment and groundwater samples are provided in Tables 4-1 and 4-2.

Quantitation/detection limits used in the analysis of soil/sediment and groundwater samples are provided in Appendix D.

The analytical data for the chemical analysis of soil/sediment and groundwater samples collected for this SSI have been reviewed by U.S. EPA for compliance with terms of CLP, and the review has been approved by U.S. EPA. The analytical data have also been reviewed by FIT for validity and usability. Any additions, deletions, or changes to the data have been incorporated in the chemical analysis results tables presented in this section.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL/SEDIMENT SAMPLES

Sample Collection Information and Parameters	Sample Number				
	S1	S2	S3	S4	S5
Date	6/26/90	6/26/90	6/26/90	6/26/90	6/26/90
Time	1100	1140	1330	1345	1440
CLP Organic Traffic Report Number	ELQ64	ELQ65	ELQ66	ELQ67	ELQ68
CLP Inorganic Traffic Report Number	MELD64	MELD65	MELD66	MELD67	MELD68
<u>Compound Detected</u> (values in $\mu\text{g/kg}$)					
<u>Volatile Organics</u>					
methylene chloride	--	--	5J	--	--
styrene	--	--	--	4J	--
<u>Semivolatile Organics</u>					
benzyl alcohol	--	--	--	860	--
benzoic acid	--	--	--	12,000JD	--
dimethylphthalate	--	--	--	470	--
butylbenzylphthalate	--	--	--	16,000D	--
bis(2-ethylhexyl)phthalate	--	--	--	6,600	--
<u>Analyte Detected</u> (values in mg/kg)					
aluminum	6,560	2,150	6,580	21,200	1,020
antimony	--	--	--	35.1NJ	--
arsenic	6.3	2B+J	7.5	1.5B	1.3B
barium	62.8	19.7B	90.7	21.1B	14.5B
beryllium	.9B	--	0.45B	--	--
calcium	4,900*J	352B*J	1,610*J	3,980*J	248B*J
chromium	14.9	3.6J	13.3	5.5J	2BJ
cobalt	6.6B	1.4B	10B	1.9B	1B
copper	53.4NJ	3.6BNJ	35.1NJ	14.3NJ	2.7BNJ
iron	21,400	2,750	21,900	3,470	2,130
lead	13.1NJ	2.2NJ	14.8NJ	7.5NJ	2.5NJ

Table 4-1 (Cont.)

Sample Collection Information and Parameters	Sample Number				
	S1	S2	S3	S4	S5
magnesium	1,480	329B	951B	593B	149B
manganese	865	67.7	1,680	110	68.2
nickel	16.9	3.6B	32.1	4.5B	2.5B
potassium	529B	165B	739B	206B	165B
selenium	—	—	0.82BNJ	0.79BN+J	0.8BNJ
sodium	62.5BJ	42.5BJ	57.7BJ	62.1BJ	36.9BJ
thallium	0.48B	—	—	—	—
vanadium	26.3	5.1B	25.6	5.7B	3.1B
zinc	24.6	7.3J	63.7	32.5	9.2J

— Not detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL. Data is quantitative.
ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semi-quantitative.
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value may be biased.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

Table 4-2
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED GROUNDWATER SAMPLES

Sample Collection Information and Parameters	Sample Number			
	RW1	Duplicate	RW2	Blank
Date	6/26/90	6/26/90	6/26/90	6/26/90
Time	1525	1525	1620	1430
CRL Log Number	90FM18S98	90FM18D98	90FM18S99	90FM02R84
CLP Organic Traffic Report Number	ELQ69	ELQ70	ELQ71	ELQ72
Temperature (°C)	6	6	12	29
Specific Conductivity (µmhos/cm)	140	140	240	3
pH	7.7	7.7	7.62	5.8
<u>Compound Detected</u> (values in µg/L)				
<u>Volatile Organics</u>				
trichloroethene	—	—	1J	—
<u>Pesticides/PCBs</u>				
gamma BHC (Lindane)	—	—	—	0.01
<u>Analyte Detected</u> (values in µg/L)				
barium	42.2	42.9	42.4	—
cadmium	—	—	0.31	—
calcium	75,300	76,500	89,400	—
copper	—	—	263	169
lead	—	—	6.4	—
magnesium	20,800	21,200	34,700	—
potassium	—	—	7,630	—
sodium	2,930	2,900	8,270	—
zinc	—	—	3,390	—
lithium	10.2	10.2	12	—
strontium	90.5	91.4	99.1	—

— Not detected.

Table 4-2 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the AFC site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

One TCL compound was detected in groundwater sample RW2. This compound cannot be attributed to the AFC site because it was not detected in on-site soil/sediment samples.

TAL analytes were detected in groundwater samples RW1 and RW2. These analytes cannot be attributed to the AFC site because the same TAL analytes were detected in the background soil sample, and the analytes are not known to be used in any operations conducted by Aligned Fiber.

A potential does exist for TCL compounds and TAL analytes to migrate from the site to groundwater in the vicinity of the site, based on the following information.

- TCL compounds and TAL analytes were detected in on-site soil/sediment samples.
- There is no evidence that the settling ponds had liners.

The potential for TCL compounds and TAL analytes to migrate from the site to groundwater is affected by the geology of the area of the site. The geology of the area of the site is characterized by 3 to 6 feet of unconsolidated overburden, which is underlain by bedrock. The bedrock consists of a thin layer of St. Peter Sandstone, which overlies Prairie du Chien Dolomites and Jordan Sandstone (Sims and Morey 1972). According to the area well logs, depth to groundwater in the area of the site ranges from 55 to 70 feet (see Appendix E for well logs of the area of the site). Both the Prairie du Chien and the Jordan formations are used as sources of drinking water. Since no confining layers exist between these formations, they are considered to form a single aquifer of concern (AOC).

The direction of groundwater flow is assumed to be south, toward the Middle Fork of the Root River, which is located approximately 1 1/2 miles south of the site (Austin 1969). However, since groundwater flow in the AOC is via fractures in the bedrock, the direction of local groundwater flow will be dictated by the orientation of fractures in the bedrock (Sims and Morey 1972).

Wells used for drinking water in the area of the site, including the Chatfield municipal wells, are screened in the Prairie du Chien and Jordan aquifers (see Appendix E). The population within a 3-mile radius of the site potentially affected by the migration of TCL compounds and TAL analytes to groundwater is approximately 1,370 persons. The population that draws water from private wells was calculated by counting houses within a 3-mile radius of the site (and outside the area served by municipal wells) on United States Geological Survey (USGS) topographic maps of the area of the site (USGS 1974, 1974a, 1974b), and multiplying that number by a persons-per-household average of 2.74 for Olmstead and Fillmore counties (U.S. Bureau of the Census 1982). This total was added to the approximately 1,030 persons served by the Chatfield municipal water system (U.S. Bureau of the Census 1990) to obtain the total target population.

5.3 SURFACE WATER

No surface water samples were collected during the SSI of the AFC site. The nearest body of surface water is the North Branch of the Root

River, which is located approximately 1/2 mile west of the site. An intermittent creek provides a surface water pathway from the site to the river.

A potential exists for TCL compounds and TAL analytes to migrate from the site to surface water because TCL compounds and TAL analytes were detected in on-site soil/sediment samples and because Aligned Fiber has an outfall that discharges directly into the intermittent creek. Surface water flow in the intermittent stream could eventually reach the Root River, which is used for recreational activities (Kester 1990). The population potentially affected by the migration of TCL compounds and TAL analytes to surface water is not known.

5.4 AIR

A release of TCL compounds or TAL analytes to the air was not documented during the SSI of the AFC site. During the reconnaissance inspection, FIT site-entry instruments (OVA, explosimeter, radiation monitor, and hydrogen cyanide monitor) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does not exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates, based on the following information.

- Aligned Fiber uses a dust collection system in its manufacturing process.
- Heavy vegetation covers much of the site, inhibiting wind-blown particles.

5.5 FIRE AND EXPLOSION

According to federal, state, and local file information reviewed FIT and an interview with site representatives, no documentation exists of an incident of fire or explosion at the site. According to FIT observations and site-entry equipment readings, no potential for fire or explosion existed at the site at the time of the SSI.

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representatives, no incidents of direct contact with TCL compounds or TAL analytes at the AFC site have been documented.

A low potential exists for persons to come into direct contact with TCL compounds and TAL analytes at the site. This potential is based on the following information.

- TCL compounds and TAL analytes were detected in on-site soil/sediment samples.
- The site is only partially surrounded by fences.

The population within a 1-mile radius of the site potentially affected through direct contact with TCL compounds and TAL analytes at the site is 150 persons. This population was calculated by counting houses within a 1-mile radius of the site on a USGS topographic map (USGS 1974) and multiplying this number by a persons-per-household value of 2.74 (U.S. Bureau of the Census 1982).

6. REFERENCES

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E & E, 1987, Quality Assurance Project Plan Region V FIT Conducted Site Inspections, Chicago, Illinois.

Kester, Harvey, January 31, 1990, Chatfield Fire Chief, telephone conversation, (507) 867-4320, contacted by Cortney Schmidt of E & E.

Sims, P. K., and G. B. Morey, 1972, editors, Geology of Minnesota: A Centennial Volume, Minnesota Geological Survey, University of Minnesota, Saint Paul, Minnesota.

Thorson, Dennis, and Allen White, June 25, 1990, Plant Engineer, Aligned Fiber, and Safety Director, MMFG, respectively, interview, conducted by Mike McAteer of E & E.

U.S. Bureau of the Census, 1982, 1980 Census of Population, Characteristics of the Population, General Population Characteristics, Minnesota, Washington, D.C.

_____, January 31, 1990, telephone conversation, contacted by Cortney Schmidt of E & E.

U.S. EPA, January 31, 1986, Potential Hazardous Waste Site Preliminary Assessment, for the AFC site, U.S. EPA ID: MND062859038, prepared by Shawn Ruotsinoja, MPCA.

_____, February 12, 1988, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

USGS, 1974, Chatfield, Minnesota Quadrangle, 7.5 Minute Series:
1:24,000.

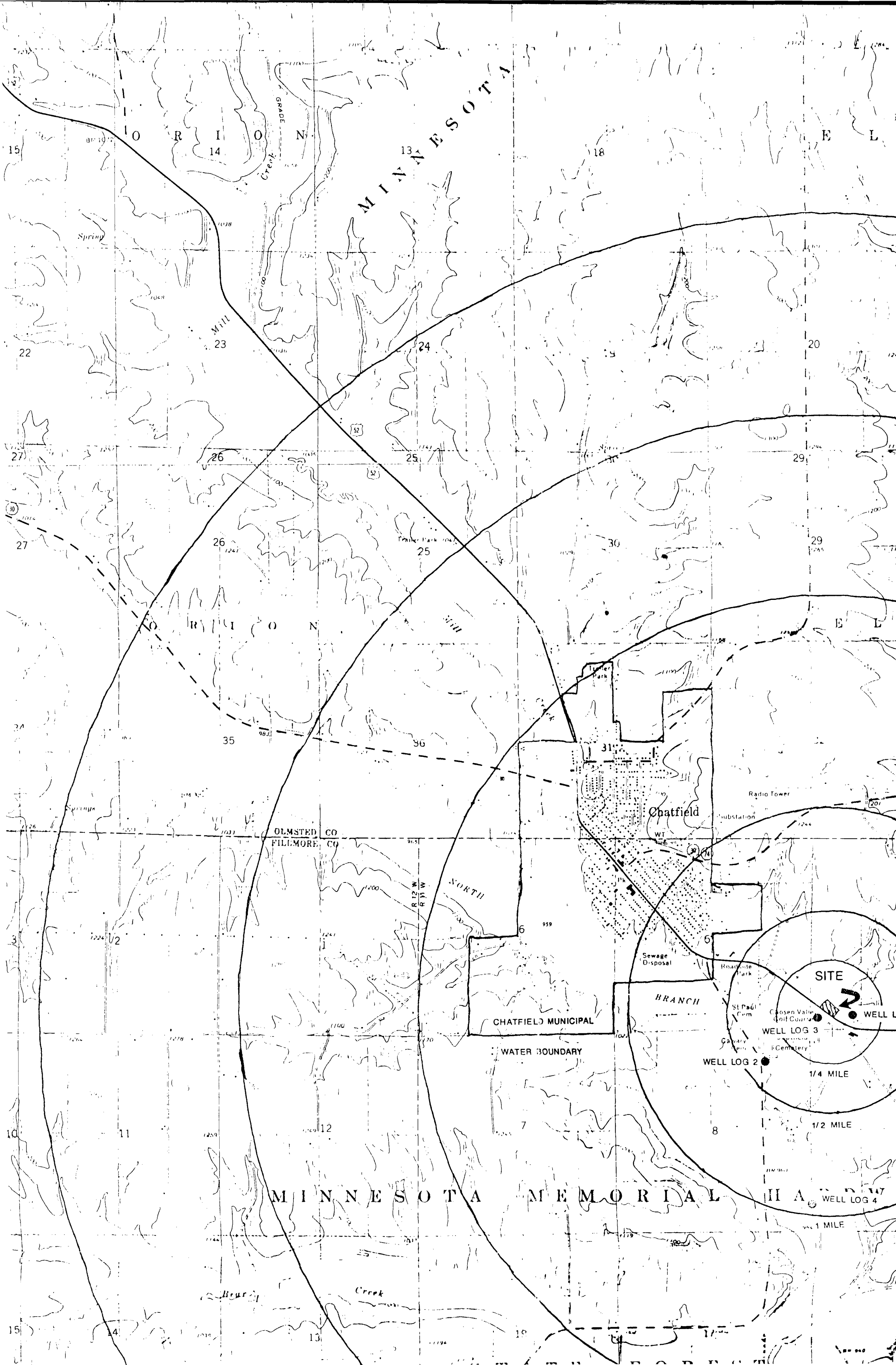
_____, 1974a, Eyota, Minnesota Quadrangle, 7.5 Minute Series:
1:24,000.




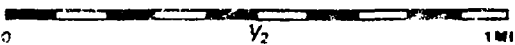
_____, 1974b, Pilot Mound, Minnesota Quadrangle, 7.5 Minute Series:
1:24,000.

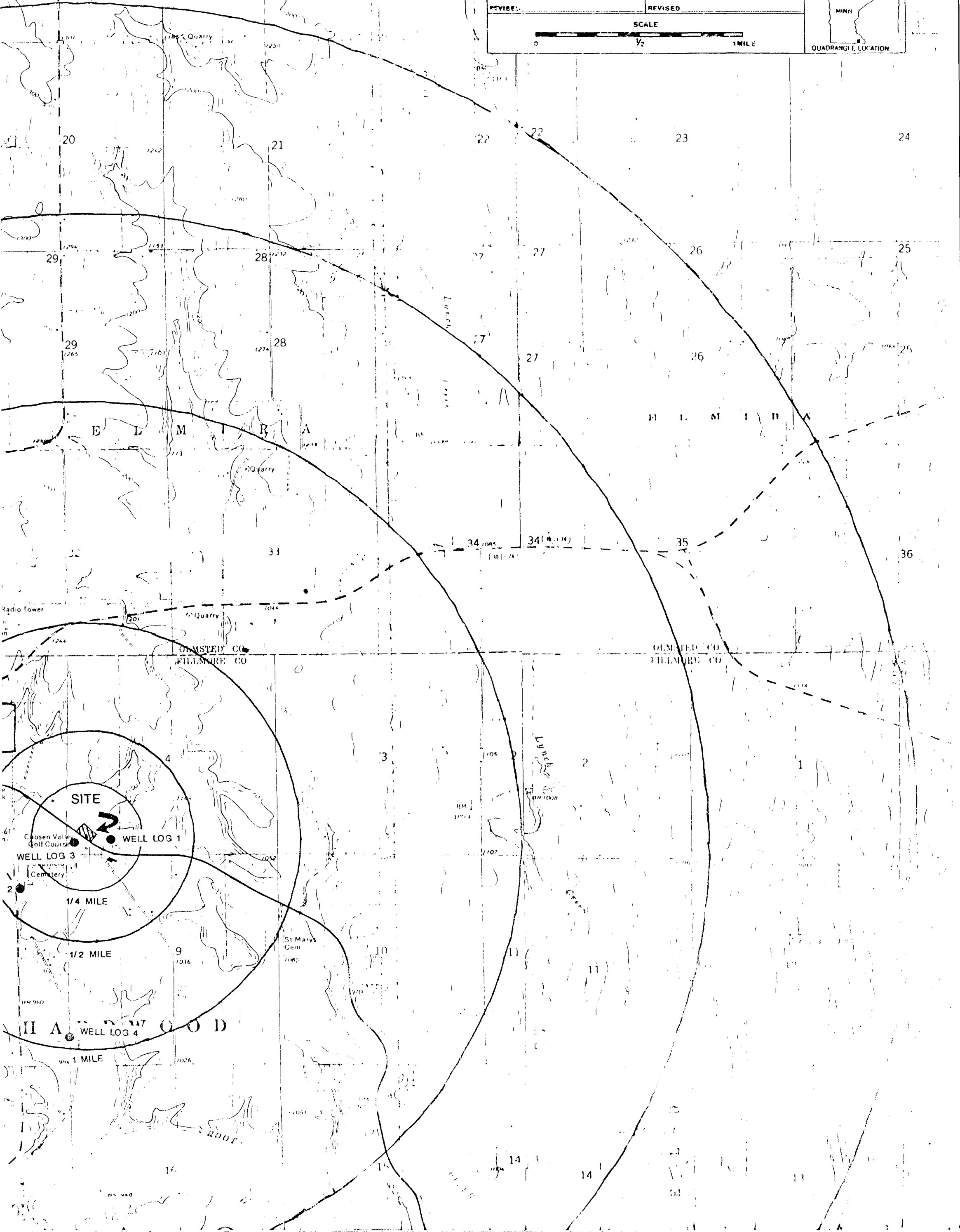
6168:8

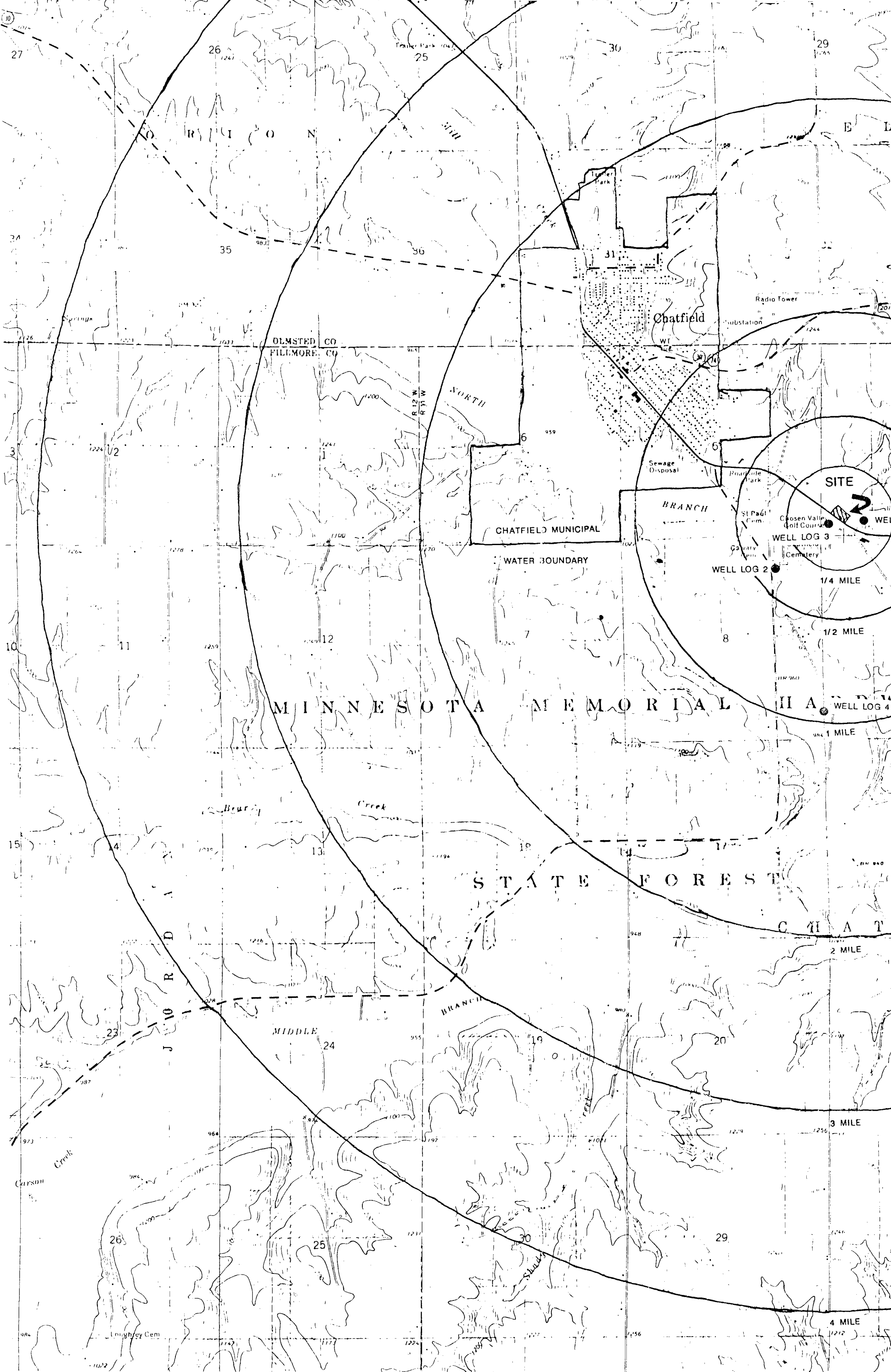
APPENDIX A

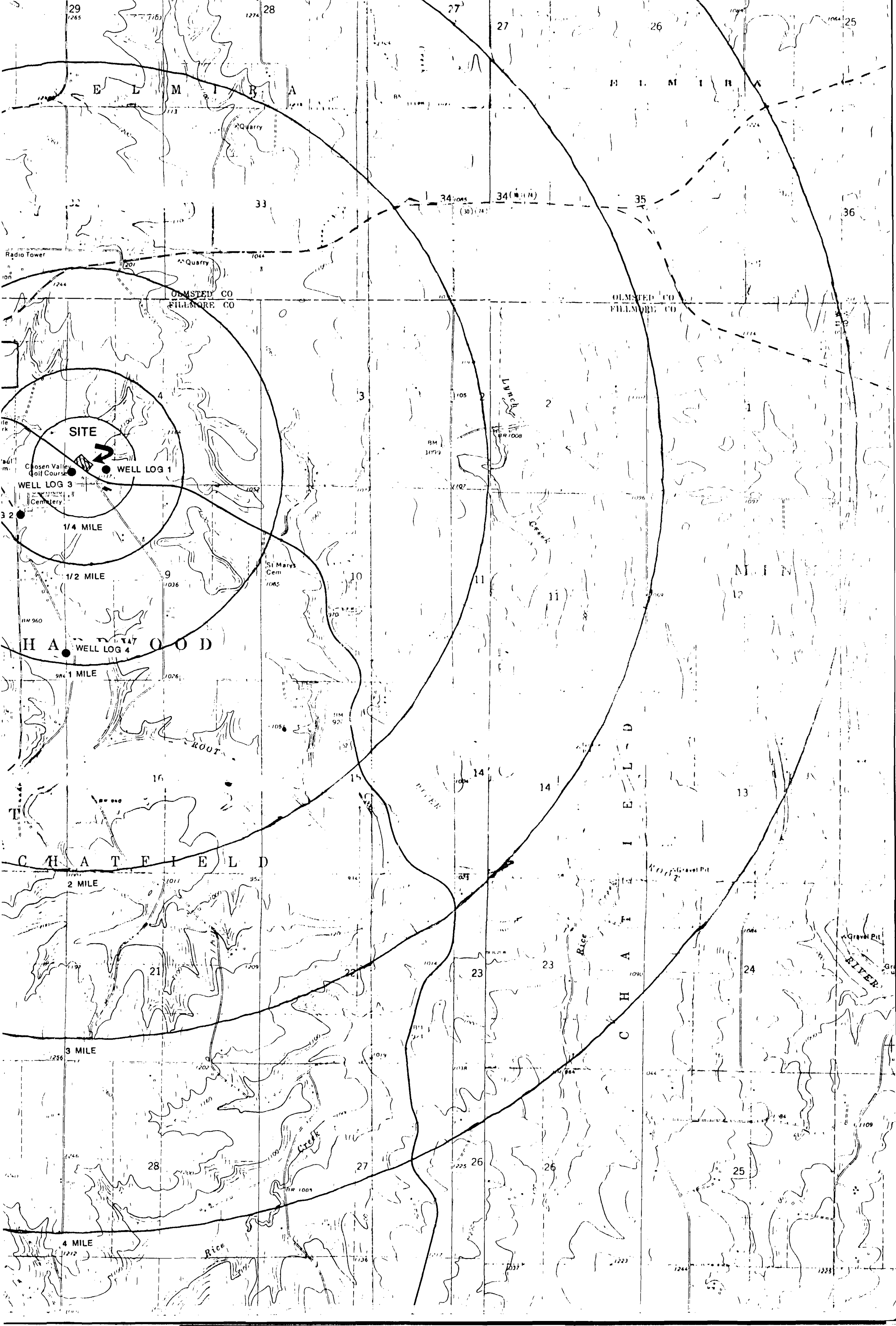
SITE 4-MILE RADIUS MAP



 ecology and environment, inc.			STE NAME AFC, Inc. U.S. EPA ID# MND062939039
USGS TOPOGRAPHIC MAPS:			CONTOUR INTERVAL 20 FEET
NAME Eyota, Minn	NAME St. Charles, Minn	 QUADRANGLE LOCATION	
DATE 1974	DATE 1974		
REVISED	REVISED		
NAME Chatfield, Minn	NAME Pilot Mound, Minn		
DATE 1974	DATE 1974		
REVISED	REVISED		
<div>SCALE</div> <div></div> <div>0 1/2 1 MILE</div>			







APPENDIX B

U.S. EPA FORM 2070-13



Site Inspection Report



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE **MN** 02 SITE NUMBER **D062859038**

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) **Aligned Fiber Composites, Inc.** 02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER **Highway 52 South**
03 CITY **Chatfield** 04 STATE **MN** 05 ZIP CODE **55923** 06 COUNTY **Fillmore** 07 COUNTY CODE **045** 08 CONG DIST **01**
09 COORDINATES
LATITUDE **43° 49' 58.0"** LONGITUDE **92° 09' 54.0"**
10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION **6 12 90** 02 SITE STATUS ☒ ACTIVE ☐ INACTIVE 03 YEARS OF OPERATION **1975** **1** active **1975** BEGINNING YEAR **1975** ENDING YEAR
04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☒ B. EPA CONTRACTOR **Ecology and Environment** ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR **19**
☐ E. STATE ☐ F. STATE CONTRACTOR ☐ G. OTHER

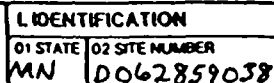
05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Mike McAteer	Geographer	Ecology and Environment	(312) 663-9415
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Cortney Schmidt	Water Resources Manager	Ecology and Environment	(312) 663-9415
Ted NehrKorn	Environmental Engineer	Ecology and Environment	(312) 663-9415
Nathan Russell	Geologist	Ecology and Environment	(312) 663-9415
Reggie Suga	Chemist	Ecology and Environment	(312) 663-9415
			()

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Allen white	Safety Director, Morrison Molded Fiber glass	400 Commonwealth Ave. Box 580, Bristol, VA 24203	(703) 669-1181
Dennis Thorson	Plant Engineer, AFC, Inc	Highway 52 South Chatfield, MN 55923	(507) 867-4031
			()
			()
			()
			()
			()

17 ACCESS GAINED BY ☒ PERMISSION ☐ WARRANT 18 TIME OF INSPECTION **0815** 19 WEATHER CONDITIONS **mostly sunny, high humidity, ~90°F, winds W to SW, ~10 mph**

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.		
Ron Swenson	Minnesota Pollution Control Agency	(612) 297-1793		
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Gregory Youngstrom	U.S. EPA	Ecology and Environment	(912) 663-9415	12 13 90



☐ I. HIGHLY VOLATILE
☐ J. EXPLOSIVE
☒ K. REACTIVE
☐ L. INCOMPATIBLE
☐ M. NOT APPLICABLE

* FIT file information has complete listing of feedstocks.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: MA 02 SITE NUMBER: D062857038

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1370 persons 04 NARRATIVE DESCRIPTION

See narrative subsection 5.2

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

See narrative subsection 5.3

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

See narrative subsection 5.4

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

See narrative subsection 5.5

01 ☒ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 150 persons 04 NARRATIVE DESCRIPTION

See narrative subsection 5.6

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: ~24 04 NARRATIVE DESCRIPTION
(acres)

See table 4-1

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1370 persons 04 NARRATIVE DESCRIPTION

See narrative subsection 5.2

01 ☒ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 140 persons 04 NARRATIVE DESCRIPTION

The site is currently active. State and FIT file information as well as the interview with the site representatives does not indicate any past injuries/exposures on-site. See narrative subsection 5.6

01 ☒ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1589 persons 04 NARRATIVE DESCRIPTION

See narrative subsection 5.6



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
MN D062859038

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No Stressed flora observed by FIT during SSI 6/26/90

01 ☐ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (include name(s) of species)

NO Stressed Fauna observed by FIT during inspection 6/26/90.

01 ☐ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None anticipated

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES 02 ☒ OBSERVED (DATE: Dec, 1986) ☐ POTENTIAL ☐ ALLEGED
(Spills/Runoff/Standing liquids, Leaking drums)
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

See subsection 3.3

01 ☐ N. DAMAGE TO OFFSITE PROPERTY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 1589 persons

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- SSI of AFC, Inc. 6/26/90

- FIT and State file information, Region II



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE **MN** 02 SITE NUMBER **D062859036**

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input checked="" type="checkbox"/> A. NPDES	MN 0048801	Dec 21, 1981	unknown	operating at time of SSI
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input checked="" type="checkbox"/> D. RCRA	unknown	unknown	unknown	AFC, Inc. is a RCRA LQG.
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPOC PLAN				
<input type="checkbox"/> G. STATE (Specify)				
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE 2 buildings
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input checked="" type="checkbox"/> C. DRUMS, ABOVE GROUND	unknown		<input type="checkbox"/> C. CHEMICAL/PHYSICAL	06 AREA OF SITE ~24 Acres
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	
<input type="checkbox"/> I. OTHER (Specify)				

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☒ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

See narrative subsections 2.3 and 3.3

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Site is not completely fenced, however all wastes are in buildings and trailers.

VI. SOURCES OF INFORMATION (See specific references, e.g. state files, sample analysis, reports)

- SSI of AFC, Inc. 6/26/90

- FIT and State file information, Region II



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE MN 02 SITE NUMBER 0062859038

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as applicable)

SURFACE WELL
COMMUNITY A. ☐ B. ☒
NON-COMMUNITY C. ☐ D. ☒

02 STATUS

ENDANGERED AFFECTED MONITORED
A. ☐ B. ☐ C. ☒
UNKNOWN D. ☐ E. ☐ F. ☐

03 DISTANCE TO SITE

A. 1/5 (mi)
B. 1/2 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING
(Other sources available)
COMMERCIAL, INDUSTRIAL, IRRIGATION
(No other water sources available)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION
(Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 1370 persons

03 DISTANCE TO NEAREST DRINKING WATER WELL 1/5 (mi)

04 DEPTH TO GROUNDWATER

60 (ft)

05 DIRECTION OF GROUNDWATER FLOW

South/Southwest

06 DEPTH TO AQUIFER
OF CONCERN

60 (ft)

07 POTENTIAL YIELD
OF AQUIFER

unknown (gpd)

08 SOLE SOURCE AQUIFER

☐ YES ☒ NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

See subsection 5.2

10 RECHARGE AREA

☒ YES COMMENTS
☐ NO

Assumed due to
Precipitation

11 DISCHARGE AREA

☐ YES COMMENTS
☐ NO

unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION,
DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY
IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:

North Branch of the Root River

AFFECTED

DISTANCE TO SITE

☐ 1/2 (mi)
☐
☐

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE
A. 150
NO. OF PERSONS

TWO (2) MILES OF SITE
B. 1219
NO. OF PERSONS

THREE (3) MILES OF SITE
C. 1370
NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

1/4 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

625

04 DISTANCE TO NEAREST OFF-SITE BUILDING

1/8 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

See narrative subsection 2.2



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

L IDENTIFICATION
01 STATE 02 SITE NUMBER
MN D062959038

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE
(Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE
($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE
($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE
(Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK

6 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

UNKNOWN (ft)

05 SOIL pH

unknown

06 NET PRECIPITATION

-2.77 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.5 (in)

08 SLOPE
SITE SLOPE

< 3 %

DIRECTION OF SITE SLOPE

North

TERRAIN AVERAGE SLOPE

< 3 %

09 FLOOD POTENTIAL

UNKNOWN

10

N/A

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

OTHER

A. None (mi)

B. None (mi)

12 DISTANCE TO CRITICAL HABITAT (for endangered species)

None (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS; NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND AG LAND

A. Adjacent (mi)

B. 1/4 (mi)

C. Unknown (mi) D. 1/2 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See Appendix "A"

VII. SOURCES OF INFORMATION (See specific references, e.g., state files, sample analysis, reports)

FIT and State file information, Region II



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
MN D062859038

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	2	U.S. EPA Central Regional Laboratory	20 Sept 1990
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL/sediment	5	TAL Skinner & Sherman Labs / Ems Laboratories	20 Sept 1990
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA 128	No readings above background
Explosimeter	No readings above background
Radiation mini-alert	No readings above background
O ₂ meter	No readings above background
hydrogen cyanide detector	No readings above background

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF Ecology & Environment, Inc. Chicago <small>(Name of organization or individual)</small>
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS E & E Chicago

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Residential well 1: 440 Feet deep
Temp: 6°C
PH: 7.7
Conductivity: 140 mmhos

Residential well 2: unknown depth
Temp: 12°C
PH: 7.62
Conductivity: 240 mmhos

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

-SSI of AFC, Inc 6/26/90



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
MN 0062859038

II. CURRENT OWNER(S)

PARENT COMPANY (if applicable)

01 NAME Morrison Molded Fiber Glass Co.			02 D+B NUMBER			08 NAME Shell Polymer & Catalyst Enterprise			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.) 400 Commonwealth Ave Box 580			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY Bristol			06 STATE VA			07 ZIP CODE 24203			12 CITY Houston			13 STATE TX			14 ZIP CODE 77073		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		

III. PREVIOUS OWNER(S) (list most recent first)

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME Aligned Fiber Composites, Inc.			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.) Highway 52 South			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE								
05 CITY Chatfield			06 STATE MN			07 ZIP CODE 55923			05 CITY			06 STATE			07 ZIP CODE		
01 NAME Clarence Perkins			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE								
05 CITY Chatfield			06 STATE MN			07 ZIP CODE 55923			05 CITY			06 STATE			07 ZIP CODE		
01 NAME			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			05 CITY			06 STATE			07 ZIP CODE		

V. SOURCES OF INFORMATION (list specific references, e.g., state files, sample analysis, reports)

SSI of AFC, Inc 6/26/90



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I IDENTIFICATION

01 STATE 02 SITE NUMBER
MN D062859038

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (if applicable)

01 NAME <i>Aligned Fiber Composites, Inc.</i>		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) <i>Highway 52 South</i>		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY <i>Chatfield</i>		06 STATE <i>MN</i>	07 ZIP CODE <i>55923</i>	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION <i>1975 to present</i>		09 NAME OF OWNER <i>Morrison Molded Fiber-Glass co.</i>					

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (See specific references, e.g., state files, sample analysis, reports)

- SSI of AFC, Inc. 6/26/90



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
MN D062859038

II. ON-SITE GENERATOR

01 NAME Same as Operator	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME Hydrite Chemical Co.	02 D+B NUMBER	01 NAME Chemical Waste Management	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME Safety Klean Corp.	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- SSI interview of AFC, Inc. 6/26/90



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I IDENTIFICATION

01 STATE 02 SITE NUMBER
MN D062859038

II. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION See narrative subsection 2.3	02 DATE <u>October, 1988</u>	03 AGENCY _____
01 <input type="checkbox"/> H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

L IDENTIFICATION

01 STATE 02 SITE NUMBER

MN D062859038

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☒ S. CAPPING/COVERING
04 DESCRIPTION

02 DATE 1988

03 AGENCY

See Narrative Subsection 2.3

01 ☐ T. BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ V. BOTTOM SEALED
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ W. GAS CONTROL
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ X. FIRE CONTROL
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ Y. LEACHATE TREATMENT
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ Z. AREA EVACUATED
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ 2. POPULATION RELOCATED
04 DESCRIPTION

02 DATE

03 AGENCY

N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE

03 AGENCY

None

III SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT and State file information, Region IV



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I IDENTIFICATION

01 STATE	02 SITE NUMBER
MN	D062859038

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

See narrative subsection 2.3

III. SOURCES OF INFORMATION (cite specific references, e.g., state files, sample analysis, reports)

- SSI of AFC, Inc 6/86/90
- FIT and State file information, Region II

APPENDIX C

FIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc

PAGE 1 OF 20

U.S. EPA ID: MND062859038

TDD: F05-8910-007

PAN: FMW0225SB

DATE: 6/26/90

TIME: 0907

DIRECTION OF
PHOTOGRAPH:
SE

WEATHER
CONDITIONS:
@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:
M. McAteer

SAMPLE ID
(if applicable):
NA



DESCRIPTION: Trailer with Drummed Non hazardous solid waste

DATE: 6/26/90

TIME: 910

DIRECTION OF
PHOTOGRAPH:
West

WEATHER
CONDITIONS:
@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:
M. McAteer

SAMPLE ID
(if applicable):
N/A



DESCRIPTION: Finished Product of AFC, Inc's manufacturing
Process

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, IncPAGE 2 OF 20U.S. EPA ID: MND062859038TDD: F05-8910-007PAN: FMN0225SBDATE: 6/26/90TIME: 0910DIRECTION OF
PHOTOGRAPH:SouthWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):NADESCRIPTION: Hardened resin and Resin splitterDATE: 6/26/90TIME: 0915DIRECTION OF
PHOTOGRAPH:NWWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):NADESCRIPTION: Bulk styrene storage trailer

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc

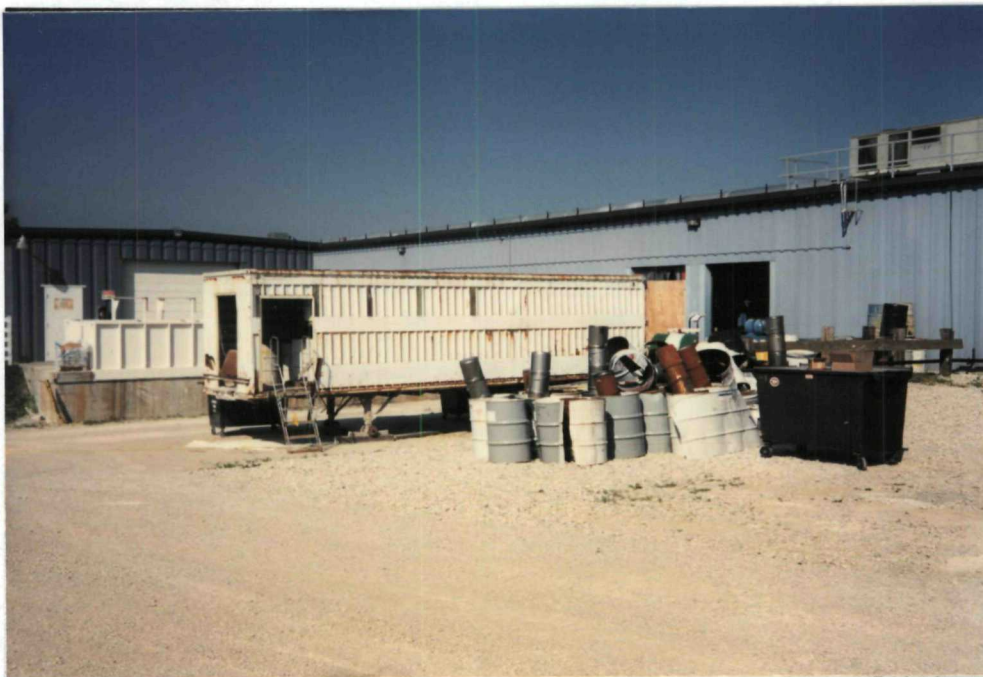
PAGE 3 OF 20

U.S. EPA ID: MND062859038TDD: F05-8910-007PAN: FMW0225SBDATE: 6/26/90TIME: 0915DIRECTION OF
PHOTOGRAPH:SWWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):NA

DESCRIPTION:

Chemical storage trailer on left, scrap drums on RightDATE: 6/26/90TIME: 0917DIRECTION OF
PHOTOGRAPH:NWWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):NA

DESCRIPTION:

Empty chemical drums used for future storage

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber composites, Inc

PAGE 4 OF 20

U.S. EPA ID: MND062859038

TDD: F05-8910-007

PAN: FMN02255B



DATE: 6/26/90 TIME: 0926 DIRECTION OF PHOTOGRAPH: west PHOTOGRAPHED BY: M. McAteer

WEATHER CONDITIONS: @90°F, Sunny, wind w-sw ~10 mph SAMPLE ID (if applicable): _____

DESCRIPTION: Panoramic view of back of plant, Note Baghouse dust collector
by the inside corner of plant.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc.PAGE 5 OF 20U.S. EPA ID: MND062859038TDD: FOS-8910-007PAN: FMN0225513DATE: 6/26/90TIME: 0937DIRECTION OF
PHOTOGRAPH:SEWEATHER
CONDITIONS:@ 90°F, SunnyWind W-SW, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID

(if applicable):

NADESCRIPTION: RCRA Hazardous waste trailer and paint filter
waste trailerDATE: 6/26/90TIME: 0941DIRECTION OF
PHOTOGRAPH:SouthWEATHER
CONDITIONS:@ 90°F, SunnyWind W-SW, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID

(if applicable):

NADESCRIPTION: Drums to collect spills inside the RCRA
Hazardous waste trailer.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites

PAGE 6 OF 20

U.S. EPA ID: MND062859038

TDD: F05-8910-007

PAN: FMN07255B

DATE: 6/26/90

TIME: 0932

DIRECTION OF
PHOTOGRAPH:

NW

WEATHER
CONDITIONS:

@ 90°F, Sunny

Wind W-SW, ~10 mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

NA

DESCRIPTION:

Trailer for Waste paint filter storage



DATE: 6/26/90

TIME: 0921

DIRECTION OF
PHOTOGRAPH:

West

WEATHER
CONDITIONS:

@ 90°F, Sunny

Wind W-SW, ~10 mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

NA

DESCRIPTION:

East side of styrene storage trailer (open)



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, IncPAGE 7 OF 20U.S. EPA ID: MND062859038TDD: F05-8910-007PAN: FMN0225SBDATE: 6/26/90TIME: 0945DIRECTION OF
PHOTOGRAPH:SouthWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):NADESCRIPTION: Manhole over water line carrying non-contact
cooling water.DATE: 6/26/90TIME: 0949DIRECTION OF
PHOTOGRAPH:SouthWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):NADESCRIPTION: NPDES outfall for non contact cooling water
into unnamed creek

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc

PAGE 8 OF 20

U.S. EPA ID: MN0062859038 TDD: F05-8910-007

PAN: FMN0225SB

DATE: 6/26/90

TIME: 1005

DIRECTION OF
PHOTOGRAPH:

South

WEATHER
CONDITIONS:

@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

NA

DESCRIPTION:

Organic peroxide Storage Area



DATE: 6/26/90

TIME: 0940

DIRECTION OF
PHOTOGRAPH:

East

WEATHER
CONDITIONS:

@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

NA

DESCRIPTION:

Septic Field in back of Facility; Alfalfa field
beyond the fence



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, IncPAGE 9 OF 20U.S. EPA ID: MND062859038TDD: F05-8910-007PAN: FMW0225SBDATE: 6/26/90TIME: 1100DIRECTION OF
PHOTOGRAPH:SEWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

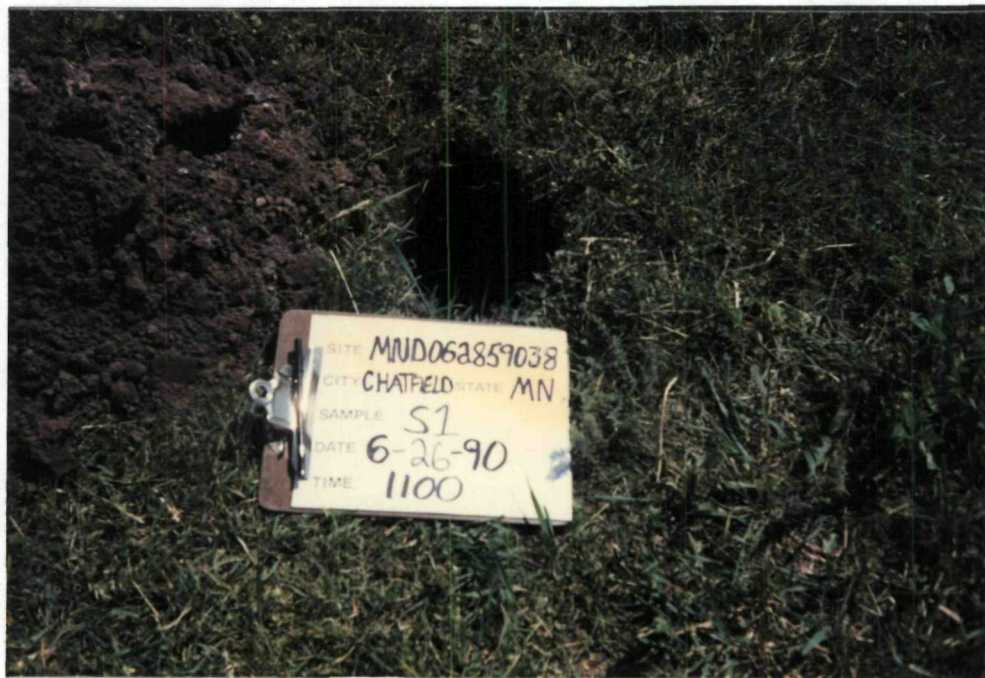
M. McAteer

SAMPLE ID

(if applicable):

S1 (composite)

DESCRIPTION:

Close up of S1 Hole #1DATE: 6/26/90TIME: 1100DIRECTION OF
PHOTOGRAPH:SEWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID

(if applicable):

S1 (composite)

DESCRIPTION:

Perspective of S1 Hole #1

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc

PAGE 10 OF 20

U.S. EPA ID: MND062859038

TDD: F05-8910-007

PAN: FMN022552

DATE: 6/26/90

TIME: 1100

DIRECTION OF PHOTOGRAPH:

East

WEATHER CONDITIONS:

@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID (if applicable):

51 (composite)

DESCRIPTION:

closeup of 51 hole #2



DATE: 6/26/90

TIME: 1100

DIRECTION OF PHOTOGRAPH:

East

WEATHER CONDITIONS:

@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:

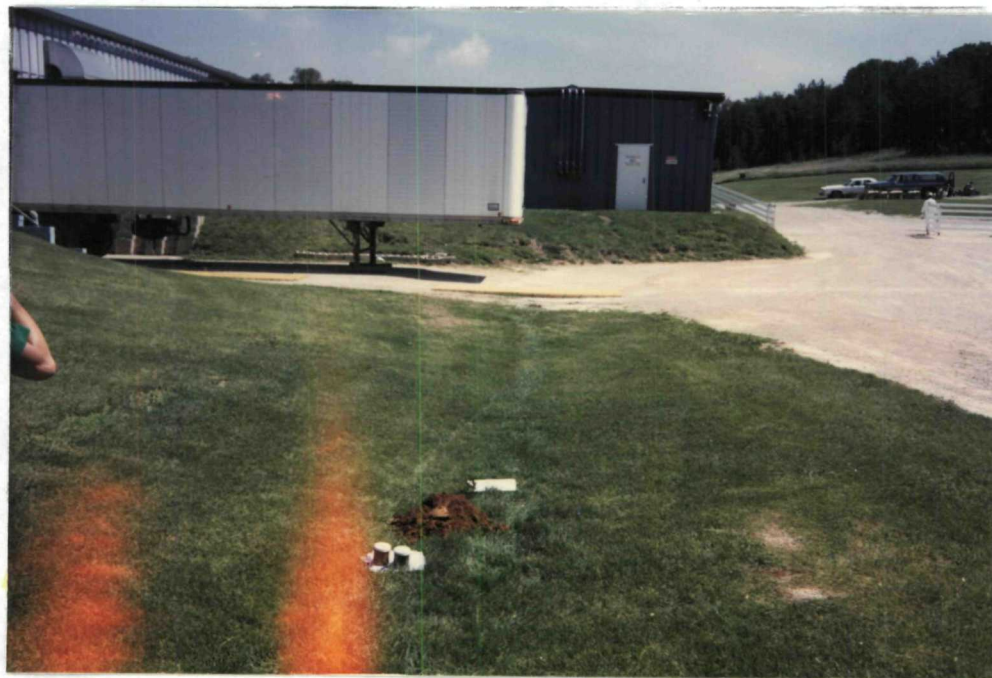
M. McAteer

SAMPLE ID (if applicable):

51 (composite)

DESCRIPTION:

Perspective of 51 hole #2



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, IncPAGE 11 OF 20U.S. EPA ID: MND062859038TDD: F05-8910-007PAN: FMW0225SBDATE: 6/26/90TIME: 1140DIRECTION OF
PHOTOGRAPH:WestWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):S 2 (composite)

DESCRIPTION:

close up of S 2 Hole #1DATE: 6/26/90TIME: 1140DIRECTION OF
PHOTOGRAPH:WestWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):S 2 (composite)

DESCRIPTION:

Perspective of S 2 Hole #1

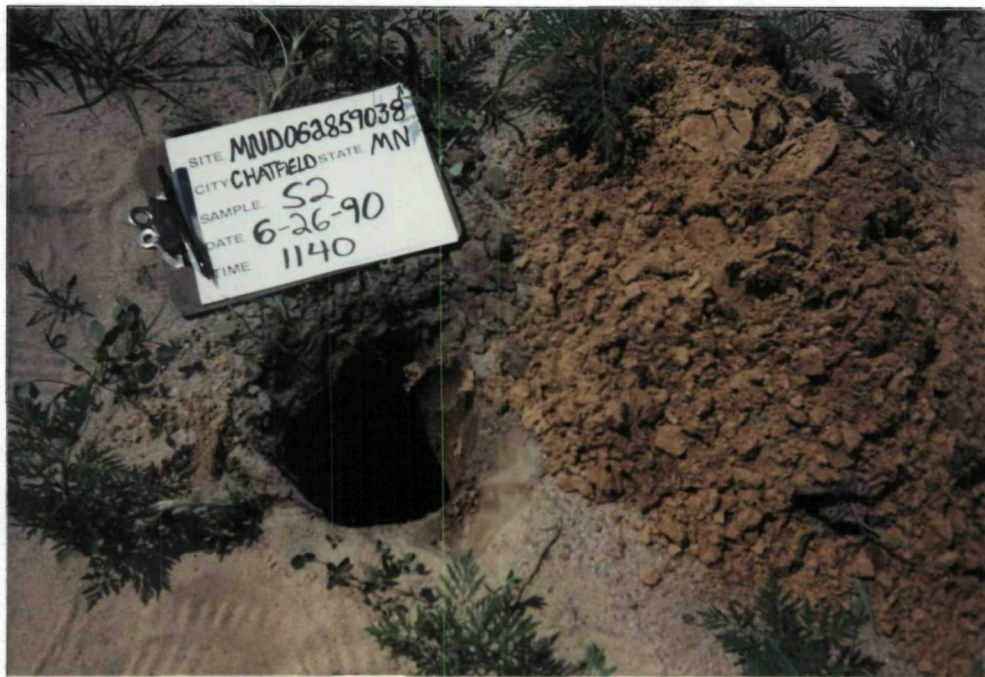
FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, IncPAGE 12 OF 20U.S. EPA ID: MND062859038TDD: F05-8910-007PAN: FMN0225SBDATE: 6/26/90TIME: 1140DIRECTION OF
PHOTOGRAPH:WestWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):S 2 (composite)

DESCRIPTION:

Close up of S 2 Hole #2DATE: 6/26/90TIME: 1140DIRECTION OF
PHOTOGRAPH:WestWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):S 2 (composite)

DESCRIPTION:

Perspective of S 2 Hole #2

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc

PAGE 13 OF 20

U.S. EPA ID: MND062859038

TDD: F05-8910-007

PAN: FMN0225SB

DATE: 6/26/90

TIME: 1140

DIRECTION OF
PHOTOGRAPH:
West

WEATHER
CONDITIONS:
@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:
M. McAteer

SAMPLE ID
(if applicable):
S2 (composite)



DESCRIPTION: close up of S2 Hole #3

DATE: 6/26/90

TIME: 1140

DIRECTION OF
PHOTOGRAPH:
West

WEATHER
CONDITIONS:
@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:
M. McAteer

SAMPLE ID
(if applicable):
S2 (composite)



DESCRIPTION: Perspective of S2 Hole #3

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc

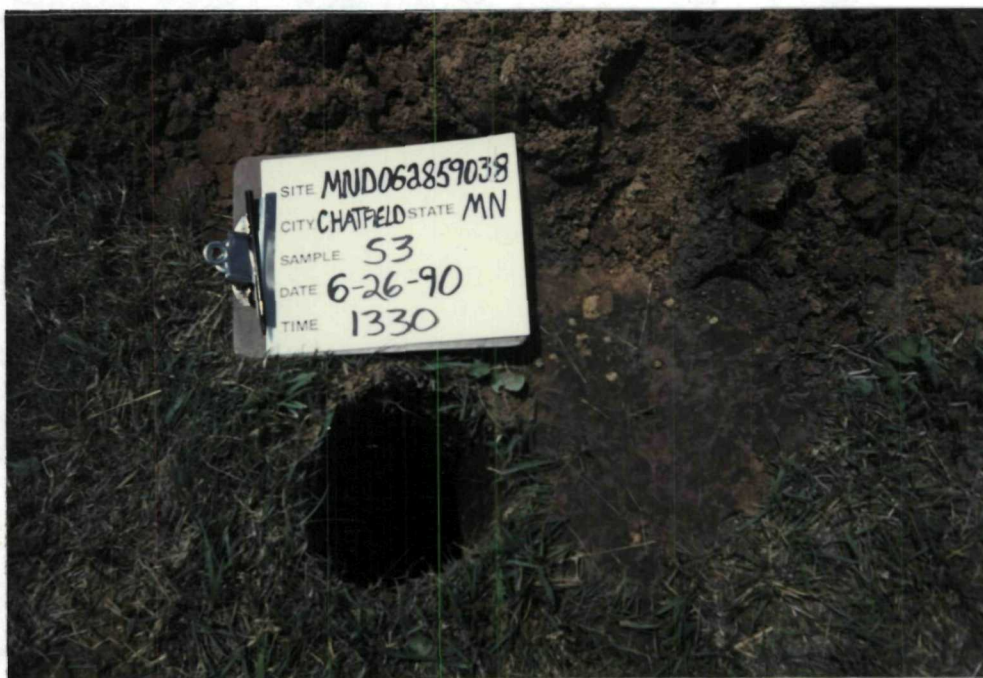
PAGE 14 OF 20

U.S. EPA ID: MND062859038TDD: F05-8910-007PAN: FMN0225SBDATE: 6/26/90TIME: 1330DIRECTION OF
PHOTOGRAPH:WestWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):S3 (composite)

DESCRIPTION:

Closeup of S3 Hole #1DATE: 6/26/90TIME: 1330DIRECTION OF
PHOTOGRAPH:WestWEATHER
CONDITIONS:@ 90°F, Sunnywind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):S3 (composite)

DESCRIPTION:

Perspective of S3 Hole #1

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc

PAGE 15 OF 20

U.S. EPA ID: MND062859038

TDD: F05-8910-007

PAN: FMW0225SB

DATE: 6/26/90

TIME: 1330

DIRECTION OF
PHOTOGRAPH:

West

WEATHER
CONDITIONS:

@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

S 3 (composite)



DESCRIPTION: Close up of S3 hole #2

DATE: 6/26/90

TIME: 1330

DIRECTION OF
PHOTOGRAPH:

West

WEATHER
CONDITIONS:

@ 90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

S 3 (composite)



DESCRIPTION: Perspective of S3 hole #2

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber composites, Inc.

PAGE 16 OF 20

U.S. EPA ID: MND062859038 TDD: F05-8910-007

PAN: FMN022550

DATE: 6/26/90

TIME: 1345

DIRECTION OF
PHOTOGRAPH:
South

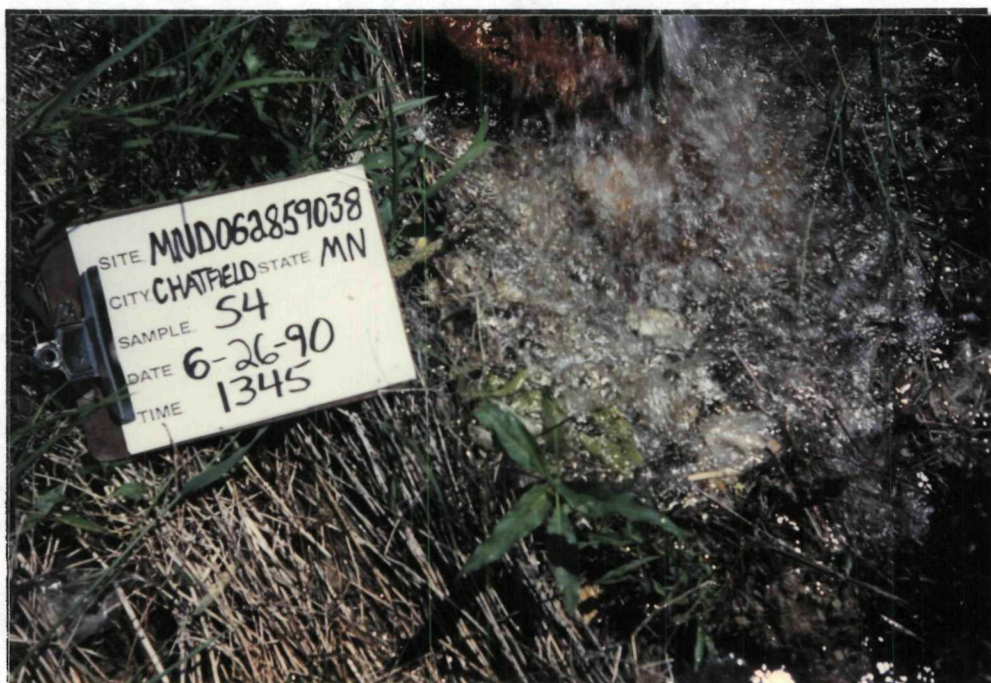
WEATHER
CONDITIONS:
@ 90°F, Sunny

wind W-SW, ~10mph

PHOTOGRAPHED BY:
M. McAteer

SAMPLE ID
(if applicable):
S4 (composite)

DESCRIPTION: Close up of S4 Hole #1



DATE: 6/26/90

TIME: 1345

DIRECTION OF
PHOTOGRAPH:
South

WEATHER
CONDITIONS:
@ 90°F, Sunny

wind W-SW, ~10mph

PHOTOGRAPHED BY:
M. McAteer

SAMPLE ID
(if applicable):
S4 (composite)

DESCRIPTION: Perspective of S4 Hole #1



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Filter Composites

PAGE 17 OF 20

U.S. EPA ID: MND062859038 TDD: F05-8910-007

PAN: FNN022553

DATE: 6/26/90

TIME: 1345

DIRECTION OF
PHOTOGRAPH:

South

WEATHER
CONDITIONS:

@ 90°F, Sunny

Wind W-SW, 20 mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

54 (composite)



DESCRIPTION: Close up of 54 Hole # 2

DATE: 6/26/90

TIME: 1345

DIRECTION OF
PHOTOGRAPH:

South

WEATHER
CONDITIONS:

@ 90°F, Sunny

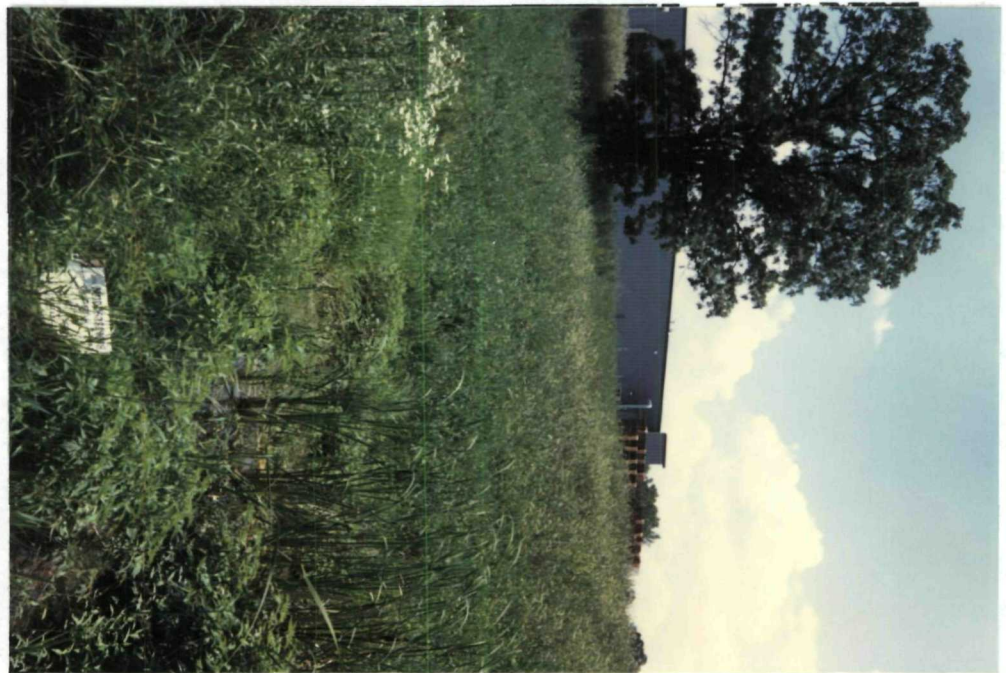
Wind W-SW, ~10 mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

54 (composite)



DESCRIPTION: Perspective of 54 Hole #2

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber composites, Inc.

PAGE 18 OF 20

U.S. EPA ID: MND062859038 TDD: F05-8910-007

PAN: FMND22550

DATE: 6/26/90

TIME: 1440

DIRECTION OF
PHOTOGRAPH:

NE

WEATHER
CONDITIONS:

@90°F, Sunny

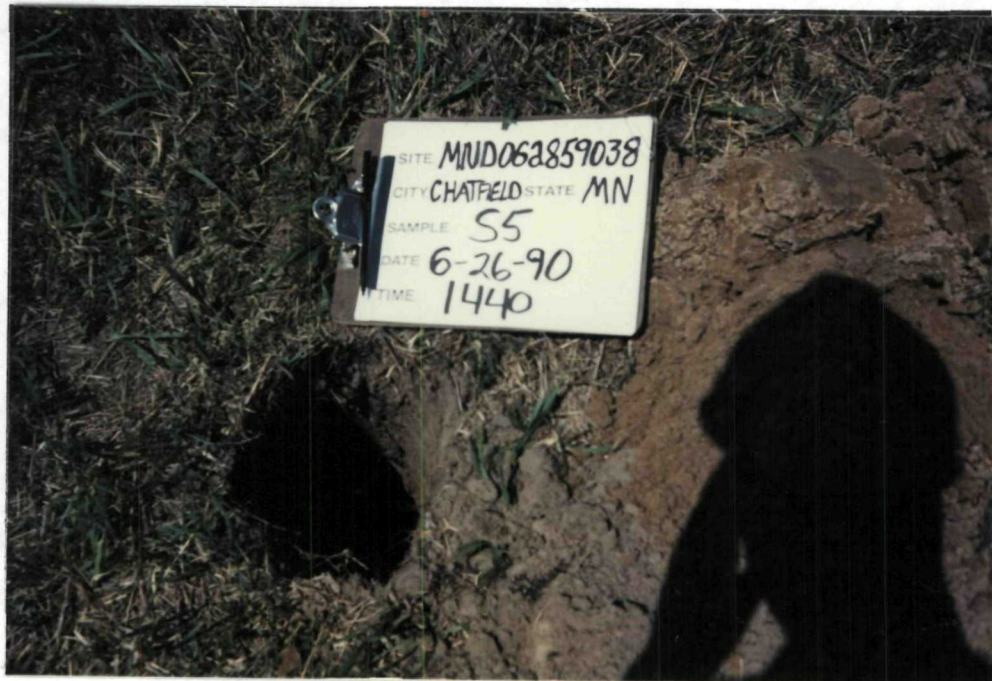
wind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

55



DESCRIPTION: close up of 55 location

DATE: 6/26/90

TIME: 1440

DIRECTION OF
PHOTOGRAPH:

NE

WEATHER
CONDITIONS:

@90°F, Sunny

wind w-sw, ~10mph

PHOTOGRAPHED BY:

M. McAteer

SAMPLE ID
(if applicable):

55



DESCRIPTION: Perspective of 55 location

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Aligned Fiber Composites, Inc.

PAGE 19 OF 20

U.S. EPA ID: MND062859038 TDD: F058910-007PAN: FMN022558DATE: 6/26/90TIME: 1525DIRECTION OF
PHOTOGRAPH:EastWEATHER
CONDITIONS:@ 90°F, sunnyWind w+sw, ~10 mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):RW1

DESCRIPTION:

Close up of RW1DATE: 6/26/90TIME: 1525DIRECTION OF
PHOTOGRAPH:EastWEATHER
CONDITIONS:@ 90°F, sunnyWind w+sw, ~10 mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):RW1DESCRIPTION: Building from which RW1 was collected

SITE NAME: Aligned Fiber Composites, Inc.

PAGE 20 OF 20

U.S. EPA ID: MND062859038 TDD: 705-8910-007PAN: FMN0225SBDATE: 6/26/90TIME: 1620DIRECTION OF
PHOTOGRAPH:EastWEATHER
CONDITIONS:@ 90°F, sunnywind wsw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):RW2

DESCRIPTION:

Close up of RW2DATE: 6/26/90TIME: 1620DIRECTION OF
PHOTOGRAPH:NorthWEATHER
CONDITIONS:@ 90°F sunnywind wsw, ~10mph

PHOTOGRAPHED BY:

M. McAteerSAMPLE ID
(if applicable):RW2

DESCRIPTION:

House from which RW2 was collected

APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND
TARGET ANALYTE LIST
QUANTITATION/DETECTION LIMITS

ADDENDUM A

**ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS**

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A (Cont.)

CONTRACT LABORATORY PROGRAM
 TARGET ANALYTE LIST (TAL)
 INORGANIC DETECTION LIMITS

Compound	Procedure	Detection Limits	
		Water ($\mu\text{g/L}$)	Soil Sediment Sludge (mg/kg)
aluminum	ICP	200	40
antimony	furnace	60	2.4
arsenic	furnace	10	2
barium	ICP	200	40
beryllium	ICP	5	1
cadmium	ICP	5	1
calcium	ICP	5,000	1,000
chromium	ICP	10	2
cobalt	ICP	50	10
copper	ICP	25	5
iron	ICP	100	20
lead	furnace	5	1
magnesium	ICP	5,000	1,000
manganese	ICP	15	3
mercury	cold vapor	0.2	0.008
nickel	ICP	40	8
potassium	ICP	5,000	1,000
selenium	furnace	5	1
silver	ICP	10	2
sodium	ICP	5,000	1,000
thallium	furnace	10	2
tin	ICP	40	8
vanadium	ICP	50	10
zinc	ICP	20	4
cyanide	color	10	2

3767:1

ADDENDUM B

**CENTRAL REGIONAL LABORATORY
DETECTION LIMITS**

TABLE B
CENTRAL REGIONAL LABORATORY
VOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT IN REAGENT WATER
Benzene	71-43-2	1.5 ug/L
Bromodichloromethane	75-27-4	1.5
Bromoform	75-25-2	1.5
Bromomethane	74-83-9	10
Carbon tetrachloride	56-23-5	1.5
Chlorobenzene	108-90-7	1.5
Chloroethane	75-00-3	1.5
2-Chloroethyl vinyl ether	110-75-8	1.5
Chloroform	67-66-3	1.5
Chloromethane	74-87-3	10
Dibromochloromethane	124-48-1	1.5
1,1-dichloroethane	75-34-3	1.5
1,2-dichloroethane	107-06-2	1.5
1,1-dichloroethene	75-35-4	1.5
Total-1,2-dichloroethene	540-59-0	1.5
1,2-dichloropropane	78-87-5	1.5
cis-1,3-dichloropropene	10061-01-5	2
trans-1,3-dichloropropene	10061-02-6	1
Ethyl benzene	100-41-4	1.5
Methylene chloride*	75-09-2	1
1,1,2,2-tetrachloroethane	79-34-5	1.5
Tetrachloroethene	127-18-4	1.5
Toluene*	108-88-3	1.5
1,1,1-trichloroethane	71-55-6	1.5
1,1,2-trichloroethane	79-00-5	1.5
Trichloroethene	79-01-6	1.5
Vinyl chloride	75-01-4	10
Acrolein	107-02-8	100
Acetone*	67-64-1	75
Acrylonitrile	107-13-1	50
Carbon disulfide	75-15-0	3
2-butanone	78-93-3	(50)
Vinyl acetate	108-05-4	15
4-Methyl-2-Pentanone	108-10-1	(3)
2-Hexanone	519-78-6	(50)
Styrene	100-42-5	1
m-xylene	108-38-3	2
o-xylene**	95-47-6	
p-xylene**	106-42-3	2.5**
Total Xylene	1330-02-7	

* Common Laboratory Solvents.

Blank Limit is 5X Method Detection Limit.

() Values in parentheses are estimates.

Actual values are being determined at this time.

** The o-xylene and p-xylene are reported as a total of the two.

TABLE B (cont.)
CRL
SEMIVOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT	BLANK LIMIT
Aniline	62-53-3	1.5 ug/L	3 ug/L
Bis(2-chloroethyl)ether	111-44-4	1.5	3
Phenol	108-95-2	2	4
2-Chlorophenol	95-57-8	2	4
1,3-Dichlorobenzene	541-73-1	2	4
1,4-Dichlorobenzene	106-46-7	2	4
1,2-Dichlorobenzene	95-50-1	2.5	5
Benzyl alcohol	100-51-6	2	4
Bis(2-chloroisopropyl) ether	39638-32-9	2.5	5
2-Methylphenol	95-48-7	1	2
Hexachloroethane	67-72-1	2	4
N-nitrosodipropylamine	621-64-7	1.5	3
Nitrobenzene	98-95-3	2.5	5
4-Methylphenol	106-44-5	1	2
Isophorone	78-59-1	2.5	5
2-Nitrophenol	88-75-5	2	4
2,4-Dimethylphenol	105-67-9	2	4
Bis(2-chloroethoxy)methane	111-91-1	2.5	5
2,4-Dichlorophenol	120-83-2	2	4
1,2,4-Trichlorobenzene	120-82-1	2	4
Naphthalene	91-20-3	2	4
4-Chloroaniline	106-47-8	2	4
Hexachlorobutadiene	87-68-3	2.5	5
Benzoic acid	65-85-0	(30)	(60)
2-Methylnaphthalene	91-57-6	2	4
4-Chloro-3-methylphenol	59-50-7	1.5	3
Hexachlorocyclopentadiene	77-47-4	2	4
2,4,6-Trichlorophenol	88-06-2	1.5	3
2,4,5-Trichlorophenol	95-95-4	1.5	3
2-Chloronaphthalene	91-58-7	1.5	3
Acenaphthylene	208-96-8	1.5	3
Dimethyl phthalate	131-11-3	1.5	3
2,6-Dinitrotoluene	606-20-2	1	2
Acenaphthene	83-32-9	1.5	3
3-Nitroaniline	99-09-2	2.5	5
Dibenzofuran	132-64-9	1	2
2,4-Dinitrophenol	51-28-5	(15)	(30)
2,4-Dinitrotoluene	121-14-2	1	2
cont.			

TABLE B (Cont.)
CRL
SEMIVOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT	BLANK (a) LIMIT
Fluorene	86-73-7	1 ug/L	2 ug/L
4-Nitrophenol	100-02-7	1.5	3
4-Chlorophenyl phenyl ether	7005-72-3	1	2
Diethylphthalate	84-66-2	1	2
4,6-dinitro-2-methylphenol	534-52-1	(15)	(30)
1,2-Diphenylhydrazine	122-66-7	1	2
n-Nitrosodiphenylamine *	86-30-6		
Diphenylamine *	122-39-4	1.5	3
4-Nitroaniline	100-01-6	3	6
4-Bromophenyl-phenylether	101-55-3	1.5	3
Hexachlorobenzene	118-74-1	1.5	3
Pentachlorophenol	87-86-5	2	4
Phenanthrene	85-01-8	1	2
Anthracene	120-12-7	2.5	5
Di-n-butylphthalate	84-74-2	2	4
Fluoranthene	206-44-0	1.5	3
Pyrene	129-00-0	1.5	3
Butylbenzylphthalate	85-68-7	3.5	7
Chrysene **	218-01-9		
Benzo(a)anthracene **	56-55-3	1.5	3
bis(2-Ethylhexyl)phthalate	117-81-7	1	2
Di-n-octyl phthalate	117-84-0	1.5	3
Benzo(b)fluoranthene ***	205-99-2		
Benzo(k)fluoranthene ***	207-08-9	1.5	3
Benzo(a)pyrene	50-32-8	2	4
Indeno(1,2,3-cd)pyrene	193-39-5	3.5	7
Dibenzo(a,h)anthracene	53-70-3	2.5	5
Benzo(g,h,i)perylene	191-24-2	4	8
2-Nitroaniline	88-74-4	1	2

* These two parameters are reported as a total.

** These two parameters are reported as a total.

*** These two parameters are reported as a total.

(a) If the blank limit is exceeded, the sample is reextracted and rerun.

() Values in parentheses are estimates.

The actual values are being determined at this time.

Note: Limits are for reagent water.

TABLE B (Cont.)
CRL
PESTICIDE AND PCB DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aldrin	309-00-2	0.005 ug/L
alpha BHC	319-84-6	(0.010)
beta BHC	319-85-7	(0.005)
delta BHC	319-86-8	(0.005)
gamma BHC (Lindane)	58-89-9	0.005
Chlordane	57-74-8	(0.020)
4,4'-DDD	72-54-8	(0.020)
4,4'-DDE	72-55-9	(0.005)
4,4'-DDT	50-29-3	0.020
Dieldrin	60-57-1	0.010
Endosulfan I	959-98-8	0.010
Endosulfan II	33213-65-9	0.010
Endosulfan sulfate	1031-07-8	(0.10)
Endrin	72-20-8	0.010
Endrin aldehyde	7421-93-4	(0.030)
Endrin ketone	53494-70-5	(0.030)
Heptachlor	76-44-8	0.030
Heptachlor epoxide	1024-57-3	0.005
4,4'-Methoxychlor	72-43-5	0.020
Toxaphene	8001-35-2	(0.25)
PCB-1242	53469-21-9	(0.10)
PCB-1248	12672-29-6	(0.10)
PCB-1254	11097-69-1	(0.10)
PCB-1260	11096-82-5	(0.10)

() Values in parentheses are estimates.
Actual values are being determined at this time.

Note: Limits are for reagent water.

TABLE B (Cont.)
CRL
INORGANIC DETECTION LIMITS

COMPOUND	PROCEDURE	DETECTION LIMITS	RANGE	UNITS
Aluminum	ICP	100	80 to 1,000,000	ug/L
Antimony	Furnace	2	2 to 30	ug/L
Arsenic	Furnace	2	2 to 30	ug/L
Barium	ICP	50	6 to 20,000	ug/L
Beryllium	ICP	5	1 to 20,000	ug/L
Boron	ICP	80	80 to 20,000	ug/L
Cadmium	ICP	10	10 to 20,000	ug/L
Cadmium	Furnace	0.2	0.2 to 2	ug/L
calcium	ICP	1000	0.5 to 1,000	mg/L
Chromium	ICP	10	8 to 20,000	ug/L
Cobalt	ICP	10	6 to 20,000	ug/L
Copper	ICP	10	6 to 20,000	ug/L
iron	ICP	100	80 to 1,000,000	ug/L
Lead	Furnace	2	2 to 30	ug/L
Lead	ICP	70	70 to 20,000	ug/L
Lithium	ICP	10	10 to 20,000	ug/L
Magnesium	ICP	1000	0.1 to 200	mg/L
Maganese	ICP	10	5 to 20,000	ug/L
Mercury	Cold vapor	0.2	0.1 to 2	ug/L
Molybdenum	ICP	15	15 to 20,000	ug/L
Nickel	ICP	20	15 to 20,000	ug/L
Potassium	ICP	2000	5 to 1,000	mg/L
Selenium	Furnace	2	2 to 30	ug/L
Silver	ICP	5	6 to 10,000	ug/L
Sodium	ICP	1000	1 to 1,000	mg/L
Strontium	ICP	10	10 to 20,000	ug/L
Sulfide	Titration	1	< 1	mg/L
Sulfide	Color	0.05	< 1	mg/L
Thallium	Furnace	2	2 to 30	ug/L
Titanium	ICP	25	25 TO 20,000	UG/L
Tin	ICP	40	40 to 20,000	ug/L
Vanadium	ICP	10	5 to 20,000	ug/L
Yttrium	ICP	5	5 to 20,000	ug/L
Zinc	ICP	20	40 to 1,000,000	ug/L
Cyanide	AA	5.0	8 to 200	ug/L

Note: The above list may or may not contain compounds that are routinely analyzed at CRL for low level detection limits for drinking water.

See inorganic Routine Analytical Services for related CAS #.

APPENDIX E

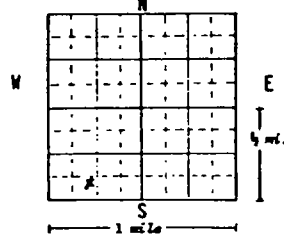
WELL LOGS OF THE AREA OF THE SITE

M.G.S # 1127

1. LOCATION OF WELL				
County Name <i>Fillmore</i>	Fraction <i>1/4 1/4 1/4</i>	Section Number <i>104</i>	Township Number <i>11</i>	Range Number <i>11</i>
Distance and Direction from Road Intersections or Street Address and City of Well Location				

3. PROPERTY OWNER'S NAME <i>City of Chatfield #3</i> <i>BILL MAHAN WATER SUP.</i>	
Address	

Show exact location of well in section grid with "X." Sketch map of well location.



ASK AT MUNIC.
FOR LOCATION
S. ON HWY 52
1 miles.

4. WELL DEPTH (completed) <i>440</i>	Date of Completion <i>2-4-76 to 4-3-76</i>
---	---

1 <input type="checkbox"/> Cable tool	4 <input type="checkbox"/> Reverse	7 <input type="checkbox"/> Driven	10 <input type="checkbox"/> Jet
2 <input type="checkbox"/> Hollow rod	5 <input type="checkbox"/> Air	6 <input type="checkbox"/> Bored	11 <input type="checkbox"/>
3 <input type="checkbox"/> Rotary	8 <input type="checkbox"/> Jetted	9 <input type="checkbox"/> Power Auger	

6. USE		
1 <input type="checkbox"/> Domestic	4 <input type="checkbox"/> Public Supply	7 <input type="checkbox"/> Industry
2 <input type="checkbox"/> Irrigation	5 <input type="checkbox"/> Air Conditioning	6 <input type="checkbox"/> Commercial
3 <input type="checkbox"/> Test Well	8 <input type="checkbox"/>	

7. CASING HEAM.	HEIGHT: Above/Below
Threaded <input type="checkbox"/> 1	Surface _____ ft.
Black <input type="checkbox"/> 2	Weight _____ lbs./ft.
in. to _____ ft. depth	Drive Shoe: Yes _____ No _____
in. to _____ ft. depth	
in. to _____ ft. depth	

8. SCREEN	Or open hole
Make _____	from _____ ft. to _____ ft.
Type _____	Dia. _____
Slot/Gauge _____	Length _____
Set between _____ ft. and _____ ft.	FITTINGS _____
_____ ft. and _____ ft.	
_____ ft. and _____ ft.	

9. STATIC WATER LEVEL	Date Measured _____
_____ ft. below _____ ft. above	
land surface	

10. PUMPING LEVEL (below land surface)	
_____ ft. after _____ hrs. pumping	_____ g.p.m.
_____ ft. after _____ hrs. pumping	_____ g.p.m.

11. WELL HEAD COMPLETION	
1 <input type="checkbox"/> Pitless adapter	2 <input type="checkbox"/> Basement offset
	3 <input type="checkbox"/> At least 12" above grade

12. Well grouted?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Cu. Yds. <i>4 1/2</i>
1 <input checked="" type="checkbox"/> Best cement	2 <input type="checkbox"/> Bentonite	3 <input type="checkbox"/>
Depth: from _____ ft. to _____ ft.		
from _____ ft. to _____ ft.		

13. Nearest source of possible contamination	
<i>T/718</i> feet _____ direction _____ type _____	
Well disinfected upon completion? Yes <input type="checkbox"/> No <input type="checkbox"/>	

14. PUMP	Date installed _____
	<input checked="" type="checkbox"/> Not installed
Manufacturer's Name _____	
Model Number _____	HP _____ Volts _____
Length of drop pipe _____	ft. capacity _____ g.p.m.
Material of drop pipe _____	
Type: 1 <input type="checkbox"/> Submersible	3 <input type="checkbox"/> L.S. Turbine
2 <input type="checkbox"/> Jet	4 <input type="checkbox"/> Centrifugal
	5 <input type="checkbox"/> Reciprocating
	6 <input type="checkbox"/>

15. WATER WELL CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

This Well Co., Inc. 55029	
Address <i>7025 N. Hwy. 43 Rochester, Mn.</i>	
Signed _____	Authorized Representative
<i>H. Holst/Randy Mueske/Dennis Thein</i>	

15. PROPERTY ACQUISITION SOURCE OF DATA, etc.

CODED

Cased to 269'

ART SWENSON

A-14-94

WELL LOG 2

SEARCHED BY J. V. L. location.

4. BILL DATED (Completed)	Date of Completion
152 n.	5-22-64

5. ☐ Cable tool ☐ Reverse ☐ Driven ☐ ~~Box~~
☐ Hollow rod ☐ Air ☐ Bored ☐ ~~11~~
☐ Rotary ☐ Jetted ☐ Power Auger **7**

1 ☒ Domestic
2 ☐ Irrigation
3 ☒ Test Well
4 ☐ Public Supply
5 ☐ Air Conditioning
6 ☐ _____

7. CASING DIAM.	REMARKS: Above 13' only
--------------------	-------------------------

Threaded ☐ Welded ☐ Surface _____ ft.
 4 Black ☐ Galv. ☐
 _____ in. to 128 ft. depth Weight _____ lbs./ft.
 _____ in. to _____ ft. depth
 _____ in. to _____ ft. depth Drive Shoe? Yes ☒ No ☐

2. SCREEN Or open hole
 Make _____ from 128 to 152

Type _____ Dia. _____
Slot/Gauge _____ Length _____
Set between _____ ft. and _____ ft.
_____ ft. and _____ ft.
_____ ft. and _____ ft.

9. STATIC WATER LEVEL
66 ft. ☐ below ☐ above Date Measured _____

10. PUMPING LEVEL (below lead surface).

_____ ft. after _____ hrs. pumping _____ S.F.M.

_____ ft. after _____ hrs. pumping _____ S.F.M.

11. WILL READ COMPLETION

☐ 1) Pitless adapter ☐ 2) Basement offset ☐ 3) At least 12" above grade

12. Well grouted? ☐ Yes ☐ No Ca. Yds. _____

☒ Gravel cement ☒ Scudonite ☐ _____
 Depth: from _____ ft. to _____ ft.
 from _____ ft. to _____ ft.

13. Nearest source of possible contamination _____
 _____ feet _____ direction _____
 Well disinfected upon completion? Yes ☐ No ☐

11. File	Date installed
----------	----------------

Manufacturer's Name **RED JACKET** ☒ For Inspection

Model Number 7BB T+C 12 1/2 Voice

Material of drop pipe _____

Type: ☒ Submersible ☐ U.S. Airborne ☐ Nonoperating
☐ Jet ☐ Centrifugal ☐ _____

15. WATER WELL CONTRACTOR'S CERTIFICATION

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Lowndes Well - Co.

١٠٠٠

Abstract

Slend

Authorized Signatures:

19-00000

Use a second sheet, if needed.

1. ISSUES, LIMITATIONS, SCOPE OF DATA, etc.

1. IDENTIFICATION, SCOPE OF DATA, etc.

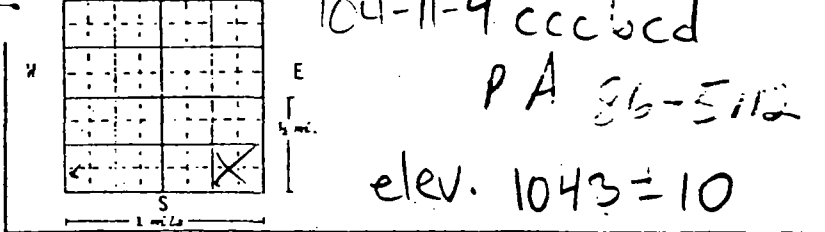
1. WELL NAME (Completed) **KILLMOKE**

2. PRECISION **1**

3. SECTION NUMBER **1**

4. DISTANCE AND DIRECTION FROM ROAD INTERSECTIONS OR STREET ADDRESS AND CITY OR TOWN LOCATION

5. SHOW EXACT LOCATION OF WELL IN SECTION GRID WITH "X". SECTION MAP OF WELL LOCATION.

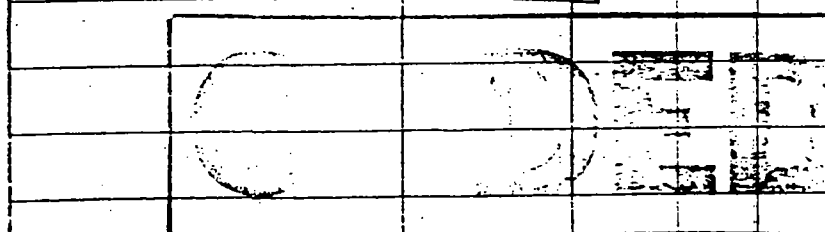


FORMATION LOG	COLOR	THICKNESS OF FORMATION	FROM	TO
GLUO DRIFT			0	6
5000 ROCK	T/1037		6	7
5500 SAND - CAVEY	T/1033		7	24
5700 SHAKLFEE	T/1019		24	125
5700 FOOT VALLEY ROCK LAYERS			125	157
5700 ONEOTA			157	161

6. AQUIFER **OPD - OPD**

7. LOCATED BY

- ☐ Address verification
- ☐ Name on mailbox
- ☐ Telephone
- ☐ Plot plan
- ☐ Survey map
- ☐ Other
- ☒ Grounds keeper
- ☐ Don't know State Why



8. REMARKS, ELEVATION, SOURCE OF DATA, etc.

DRILLED 10x8

1. WELL NAME (Completed) **HOOSEN VALLEY (215 5112)**

2. PRECISION **1**

3. SECTION NUMBER **1**

4. DISTANCE AND DIRECTION FROM ROAD INTERSECTIONS OR STREET ADDRESS AND CITY OR TOWN LOCATION **CHATFIELD WELL LOG 3**

5. SHOW EXACT LOCATION OF WELL IN SECTION GRID WITH "X". SECTION MAP OF WELL LOCATION.

6. WELL DEPTH (Completed) **161** ft. Date of Completion **7-31-64**

7. Casing
- | | | | |
|-------------------------------------|----------------------------------|--------------------------------------|------------------------------|
| <input type="checkbox"/> Cable tool | <input type="checkbox"/> Reverse | <input type="checkbox"/> Driven | <input type="checkbox"/> Jet |
| <input type="checkbox"/> Hollow rod | <input type="checkbox"/> Air | <input type="checkbox"/> Bored | <input type="checkbox"/> |
| <input type="checkbox"/> Rotary | <input type="checkbox"/> Jetted | <input type="checkbox"/> Power Auger | <input type="checkbox"/> |
8. USE
- | | | |
|-------------------------------------|---|--|
| <input type="checkbox"/> Domestic | <input type="checkbox"/> Public Supply | <input type="checkbox"/> Industry |
| <input type="checkbox"/> Irrigation | <input type="checkbox"/> Air Conditioning | <input checked="" type="checkbox"/> Commercial |
| <input type="checkbox"/> Test Well | <input type="checkbox"/> | <input type="checkbox"/> |

9. SCREEN

Make **8** Threading ☐ 1 Welded ☐ 2

Black ☐ 1 Galv. ☐ 2

in. to **55** ft. depth

in. to **55** ft. depth

in. to **55** ft. depth

Set between **55** ft. and **161** ft.

10. STATIC WATER LEVEL **72** ft. ☐ below ☐ above land surface Date measured

11. PUMPING LEVEL (below land surface)

ft. after **72** hrs. pumping **72** S.P.M.

ft. after **72** hrs. pumping **72** S.P.M.

12. WELL HEAD COMPLETION

☐ Pitless adapter ☐ Basement offset ☐ At least 12" above grade

13. Well grouted? ☐ Yes ☐ No Ca. Yds. **72**

☐ Fast cement ☐ Bentonite ☐

Depth: from **72** ft. to **161** ft.

from **72** ft. to **161** ft.

14. NEAREST SOURCE OF POSSIBLE CONTAMINATION

feet **72** direction **72**

Well disinfected upon completion? Yes ☐ No ☐

15. PUMP

Date installed **72**

Manufacturer's Name **PEERLESS**

Model Number **72**

Length of drop pipe **130** ft. capacity **72** S.P.M.

Material of drop pipe **72**

Type: ☐ Submersible ☒ U.S. Turbine ☐ Reciprocating

☐ Jet ☐ Centrifugal ☐

16. WATER WELL CONTRACTOR'S CERTIFICATION

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Rowland Well Co.

License Business 3000

Address

City

State

1. LOCATION OF WELL

County Name **FILLMORE** Fraction **1** Section Number **1** Township **1967** Range **7** E. of R. **1** S. of R. **1** W. of R. **1**

Sketch and direction from road intersections or street address and city of well location

2. WELL OWNER'S NAME
CHARLES P. DELANEY

Address
CHATFIELD 226023

3. EXACT LOCATION OF WELL IN SECTION GRID WITH "X"

Sketch map of well location

Section grid showing well location (X) in the center of the grid.

Scale: 1 mile

4. WELL DEPTH (Completed)
289 ft.

Date of Completion
9-4-74

5. 1. ☐ Cable tool 4. ☐ Reverse 7. ☐ Driven 10. ☐ Saw
2. ☐ Hollow rod 5. ☐ Air 8. ☐ Bored 11. ☐ _____
3. ☐ Rotary 6. ☐ Jetted 9. ☐ Power Auger

6. USE
1. ☒ Domestic 4. ☐ Public Supply 7. ☐ Industry
2. ☐ Irrigation 5. ☐ Air Conditioning 8. ☐ Commercial
3. ☐ Test Well 6. ☐ _____

2. FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
DRIFT			0	3
ST PETER	T/967		3	7
SHAKOPEE	T/963		7	87
ROOT VALLEY			87	98
ONECTA			98	271
CLAY SANDROCK	T/600		271	281
HARD SANDROCK w/ SHALE			281	289

7. CASING DIAM.
Threading ☐ 1. Welded ☐ 2. Surface ☐ 3. ft.
Black ☐ 4. Galv. ☐ 5. ft. depth
In. to **150** ft. depth
In. to _____ ft. depth
In. to _____ ft. depth

Weight _____ lb./ft.
Drive Shoe: Yes ☒ No ☐

8. SCREEN
Make _____ Or open hole from **150** ft. to **289** ft.
Type _____ Dia. _____
Slot/Gauge _____ Length _____ FITTINGS:
Set between _____ ft. and _____ ft.
_____ ft. and _____ ft.
_____ ft. and _____ ft.

9. STATIC WATER LEVEL
55 ft. ☒ below ☐ above land surface Date Measured _____

10. PUMPING LEVEL (below land surface)
_____ ft. after _____ hrs. pumping _____ p.p.m.
_____ ft. after _____ hrs. pumping _____ p.p.m.

11. WELL HEAD COMPLETION
☒ Pitless adapter ☐ Basement offset ☐ At least 12" above street

12. Well grouted?
☒ Yes ☐ No Cu. Yds. **3**
1. ☐ Best cement 2. ☐ Bentonite 3. ☐ _____
Depth: from _____ ft. to _____ ft.
from _____ ft. to _____ ft.

13. Nearest source of possible contamination
_____ feet _____ direction _____ type
Well disinfected upon completion? Yes ☐ No ☐

14. PUMP
Date Installed **10-8-74**
☒ Installed ☐ Not installed
Manufacturer's Name **RED-JACKET**
Model Number **980** HP **1/2** Volts
Length of drop pipe **84** ft. capacity _____ p.p.m.
Material of drop pipe _____
Type: 1. ☐ Submersible 2. ☐ U.S. Turbine 3. ☐ Reciprocating
4. ☐ Jet 5. ☐ Centrifugal 6. ☐ _____

15. WATER WELL CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Rowland Well Co.
License Number _____ State of _____
Address _____
Signed _____ Date _____
Authorized Representative

104-11-9 ccc cbc
ELEV 970 ± 10
As per
C.P.D. - C.D.N.

LOCATED BY

1. ☐ Address Verification
2. ☐ Name on Mailbox
3. ☐ Lot-Block
4. ☐ Plat Book
5. ☒ Info. From Owner
6. ☐ Info. From Neighbor
7. ☐ Other _____
☐ Can't Locate State Why _____

Use a second sheet, if needed.

Drilled 8x4